

## 4.2 Section two

This section spans in a straight, 700 m long horizontal line between two important nodes of Hornsgatan, Mariatorget and Zinkensdamm. If Mariatorget is a green oasis and a place for recreation and relaxation, Zinkensdamm is a hot spot in terms of traffic, transportation and communication. Here, two streets, Hornsgatan and Ringvägen, the underground transport system, and various shops and businesses that cater to the surrounding neighborhood, overlap and intersect. In addition, a well-known sports arena and the highly frequented park/green area, Skinnarviksparken, are located nearby.

The inclination of Hornsgatan along this section tilts slightly upwards, but the difference is so negligible that it is hard to detect while walking along or otherwise observing this section. The spatial character of the built environment has two clear-cut features, one being that the city street has the typical outline of a *canyon*, which means that the morphologic relationship of *building – street – building* correlates to the typical spatial conditions of a geological canyon, and its characteristic U-shape. The other spatial characteristic is the “interruption” of the straight façade-line of the street canyon.

A 130 m x 33 m wide opening in the northern section of Hornsgatan marks the position of Bysistorget, a square with cafés, an art shop, restaurants, a bookstore and a tiny urban park leading up to Brännkyrkagatan some 4 meters above the square.

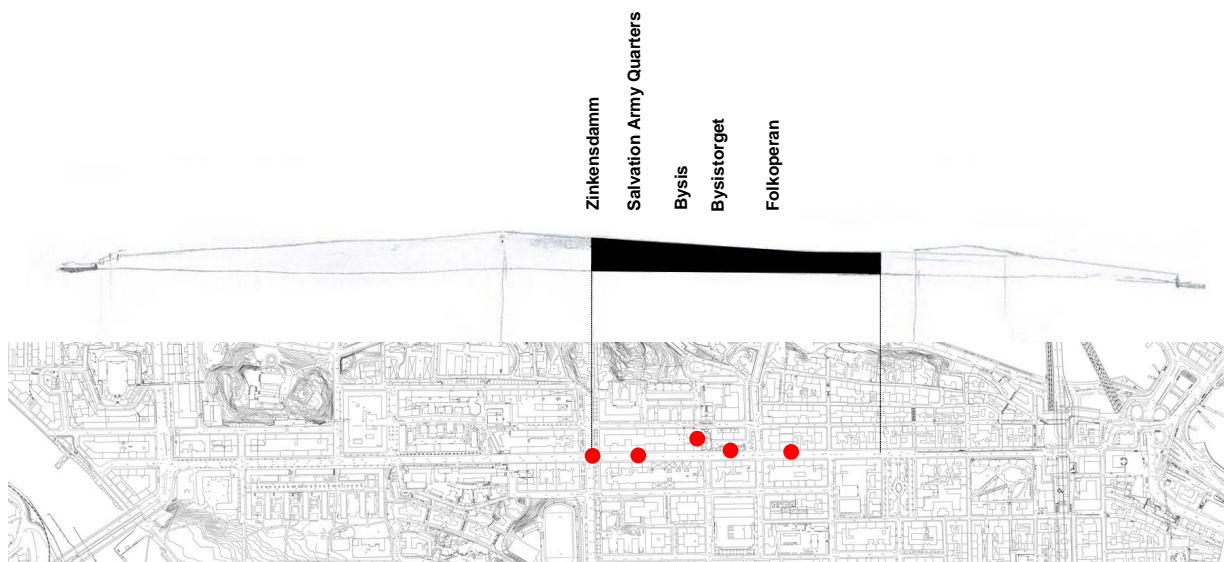
Around the corner, right at the brim of Hornsgatan, we find an entrance to a small and accessible open inner court covered with gravel, an 18<sup>th</sup> century prison yard that presently hosts a restaurant.

The area is characterized by its blend of small-scale businesses densely packed side by side at ground level along each side of the (residential) building blocks that were erected at the beginning of the 20<sup>th</sup> century and earlier.

Compilations of facets of spatio-sonic information for section two are available in the appendix.

### Site-specific qualitative sound analyses:

- Folkoperan
- Bysistorget
- Bysis
- Salvation Army Quarters
- Zinkensdamm

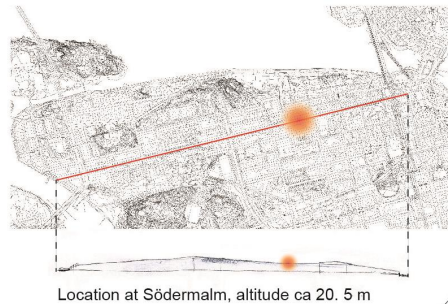


Section two: Mariatorget, altitude 20. 4 m, Zinkensdamm altitude 22. 7 m

# Site: Folkoperan

## Description:

Section of Hornsgatan with street canyon character, exposed to heavy traffic by pedestrians and motor vehicles. Commercial, cultural activities at street level, residential area.



## Spatial quality

### Architecture

- Street canyon, 24 m wide.
- Mostly residential buildings, 5-6 stories high with commercial and cultural activities (the opera house of Folkoperan) at street level.

### Topography

- Flat ground with a barely detectable incline.

### Materiality

- Hard materials (asphalt, concrete pavement, facades).

## Contents

### Activities

- Heavy pedestrian use of public outdoor space.
- Intense prevalence of motor vehicle traffic.
- Transportational and commercial activities dominate the site in total.
- Cultural activity (the opera house).

### Functions

- Transitional functions (traffic and pedestrians).
- Commercial and service related functions.
- Cultural institution (Folkoperan).
- Residential area.

## Temporal features

### Sound quality

- Predomination of high-intensity sounds (traffic).
- Low-intensity sounds and sounds of changing intensity appear in the recurrent breaks of the traffic flow.

### Mobility

- The situation offers two options to move closer to or away from the site. No alternative walking routes exist.
- Limited ability to regulate personal distance to sounds along the street.

### Accessibility

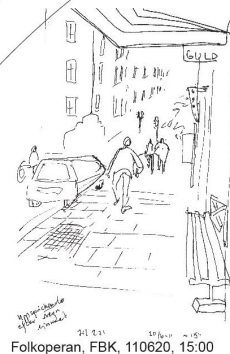
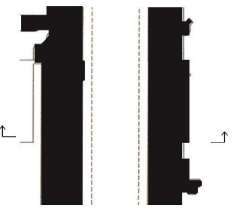
- Pedestrians have two options for site access.
- Accessing adjacent outdoor spaces containing contrasting sound qualities, is a non-existent possibility at this point.

Visual, sonic and textual observations,



Video recording 360°, 101113, 10:14

Morphologic plan and section:



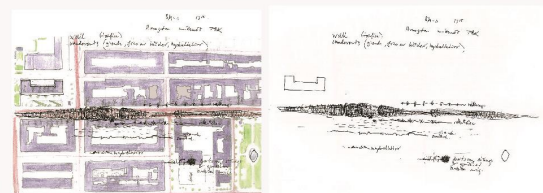
Color index describing observed qualities of space and sound:



Medium and intense sonic situation, mineral and solid materials

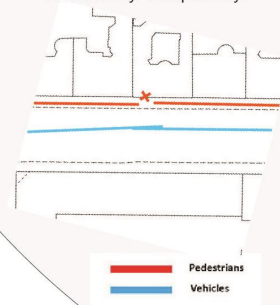


Sound notation from the transparency inventory, 110908, 13:15



Sound recording 110908, 13:15

Accessibility/ escapeability:



Mapped functions at groundplan, 2010, on an excerpt of the sociotope map

Hemköp  
Jewellery  
Bar/Opera  
Café  
Skin care  
Boutique



Carpets  
Interior  
Tailor  
Hair dresser  
Computer  
Café  
Health shop  
Jewellery  
Flowers  
Clothes



Referential noise map

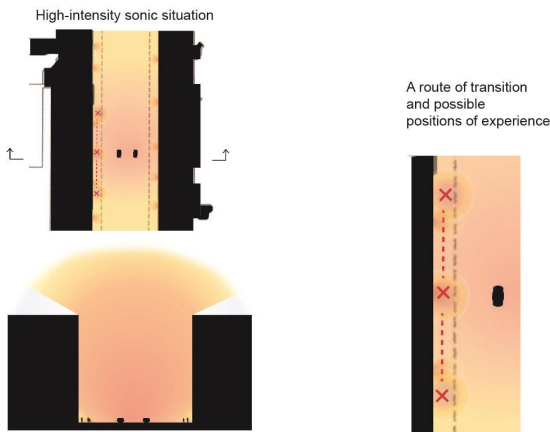
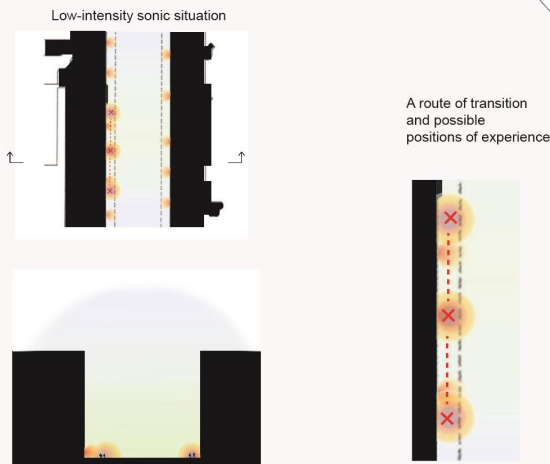
Equivalent sound level dB (A)

70 <	85 <	60 <	55 <	50 <	45 <	40 <
<=70	<=85	<=60	<=55	<=50	<=45	<=40

# Qualitative sound analysis

## descriptions and analyses

### Spatio-sonic illustrations:



### Key to spatio-sonic illustrations

- High and persistent sounds generated on site by traffic
- Background sounds generated at a long distance by human, nature, animal or technical activities
- Low-intensity sounds generated at a short distance by human, nature, animal or technical activities
- Abrupt change between low-intensity and high-intensity sounds (blue = background sounds, red = high-intensity and persistent sound coming from traffic, black = the corner of a building)
- Sounds generated by someone moving or standing still at a possible position of experience (clothes rustling, talking, breathing, walking etc.)
- Sounds generated by commercial, service-related, cultural or other activities at the ground level of a building, for example people moving in and out of a store or restaurant producing a high level of man made sounds at a specific point.
- A possible position of experience
- A route of transition
- Gradual transition between high, persistent sounds and low-intensity or background sounds

The site is a classical street canyon, with 19<sup>th</sup> century buildings about 5 or 6 stories high along with some more recent structures.

The street is vivid here as the street-level activities are situated close to one another and include small shops, cultural institutions (the opera house of Folkoperan), cafés and restaurants. Standing outside Folkoperan, you have an overview of what goes on at street-level both at a distance and up close, since the street is laid out in a straight line.

The canyon-like character of the site leaves the pedestrians with only two access options, one in each direction of the street. As is the case with almost all sites along Hornsgatan, traffic is very intense, with loud sound levels that periodically drown out less dominant sounds. There is almost no connection with the opposite side of the street, though the visual connection compensates for this loss to a certain degree. It is not possible to hear what is going on across the street as your focus is directed to your immediate surroundings. The entrance to Folkoperan provides sonic relief compared to locations closer to the street.

The sounds generated by actions connected to the street life is present in the recurring breaks of relative silence when the flow of traffic ceases. Due to the physical features of the site and the intense traffic, a pedestrian positioned on the sidewalk is highly exposed to site-specific sonic qualities.

As the options are limited with regard to direction when moving along the street, it is vital to discuss the nature of its street life and the impact it has on sound quality.

Sandwiched between the street and the facade, the behavior, prevalence and intensity of existing or future sounds in the neighborhood, is necessary to assess and evaluate the impact and the behavior of existing and future sounds, along with their prevalence and intensity, in connection with any endeavors on such an outdoor urban environment.

The site has a two-fold sonic character that spans between very high and less high sound intensities of different qualitative content. Temporal breaks in the stream of heavy and loud sounds emitted from traffic, leave space for contrasting sonic qualities to be experienced due to the generally busy sidewalks. This indicates that the site is dynamic and variegated in terms of sound quality, though there is a predomination of high-intensity sounds. This indicates that the situation can be improved and stabilized by traffic-reduction methods.



# Site: Bysistorget / Bysis

## Description:

**Minor recreational, restorative and commercial node**

## Spatial quality Architecture

- Square, mini-park and open mini-yard (Bysis).
- Spatial structure that break up the street-canyon character of Hornsgatan.
- Building types from the beginning of 20<sup>th</sup> century, 5-6 stories high.

## Topography

- Flat ground at the square, change of ground level (3-4 m) above the mini park.

## Materiality

- Mixed hard and soft materials (grass, trees, gravel, asphalt, facades).
- Gravel at the inner yard of Bysis, no greenery.

## Contents

### Activities

- Intense pedestrian use of public outdoor space.
- Transitional site for traffic and people.
- Traffic is present and heavy at Hornsgatan and also fairly intensive at one side of the square (Torkel Knutssongatan) as well as the outflow of Rosenlundsgatan close to the yard of Bysis.
- Commercial, recreational and restorative activities are present and numerous at site.

### Functions

- The site has several overlaid functions.
- Communication, commerce and leisure.
- Residential area.
- Recreational/social area functioning as a node.

## Temporal features

### Sound quality

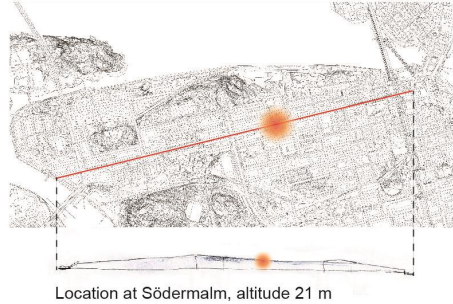
- Predomination of high-intensity sounds (traffic) near Hornsgatan.
- Predomination of human sounds at the interior parts of the square (low-intensity sounds or sounds of changing intensities coming from cafés, restaurants and other site-bound activities for example).

### Mobility

- The site offers several options to move closer to or away from its most sound exposed parts.
- There are numerous ways to regulate your distance to the various spatio-sonic qualities present. The inner yard of Bysis is situated almost right at Hornsgatan and offers a possibility to move away/retreat from the sidewalk.

### Accessibility

- There exist several access options to the square. The courtyard area is open to the public, even though it is private property.



**Visual, sonic and textual observations,**

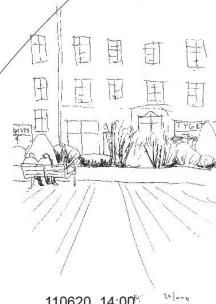
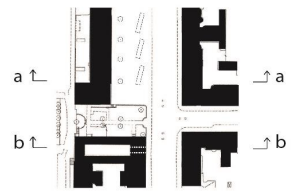
Video 360°  
Bysistorget,  
101112, 13:48



Video 360°  
Bysis,  
101111, 11:20



Morphologic plan and section:



110620, 14:00°

Color index describing  
observed qualities of  
space and sound:

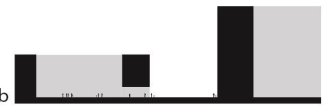


**Bysistorget, mitten**  
Intense/ High-intensity sonic situation,  
mineral and solid materials/  
soft and porous materials

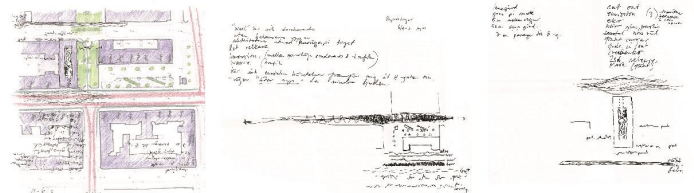
**Bysis**  
Low-intensity sonic situation,  
mineral and solid materials



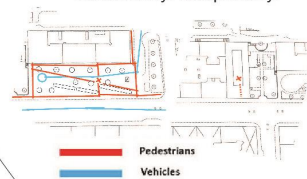
b-b



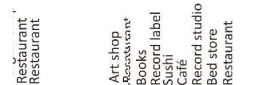
Sound notation from the transparency inventory, 110908, 13:15



Accessibility/ escapeability:



Mapped functions at  
groundplan, 2010,  
on an excerpt of the  
sociotope map

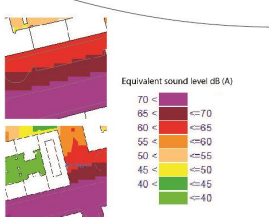


**Courtyard of Bysis**  
Sound recording  
110908, 12:40

**Square of Bysis**  
Sound recording  
110906, 14:00



Square of Bysis



Courtyard of Bysis

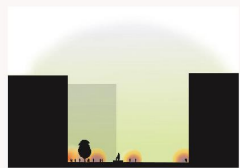
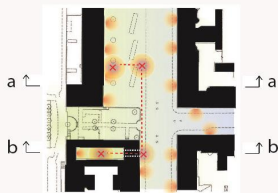
Referential  
noise map

# Qualitative sound analysis

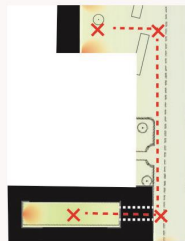
## descriptions and analyses

### Spatio-sonic illustrations:

#### Low-intensity sonic situation



A route of transition and possible positions of experience



Bysistorget is square that measures 37 m deep and 138 m wide opening located along Hornsgatan. Here, the street opens up and the sun reach the northern side of the square, which features greenery and and some mineral materials. Three sections of obliquely placed plantings spatially separate the inner parts of the square from the traffic lanes. At one end , the tiny park known as side Bysistäppan, acts as a green passage to Brännkyrkagatan some 4 m above. The square and the park are popular in all seasons. Thanks to the relatively long distance away from the traffic lanes, the site functions as a recreational spot in this area. The open space offers a possibility to move freely over a relatively large area of land, providing relief from traffic and an atmosphere more conducive to social relations and relaxation.

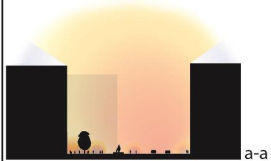
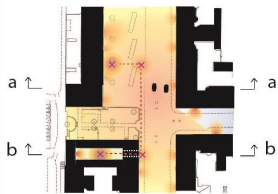
Around the corner of the square is the entrance to the old prison, the courtyard of Bysis, which one enters through a 12 m deep opening in the wall. Though this is private property, it is open to the public.

At the square of Bysistorget, a mixture of functions, commerce and leisure creates a sonically dynamic place containing several layers of sonic information and qualities.

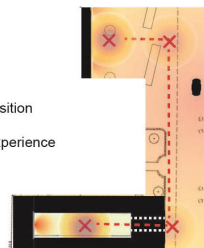
At the area closest to Hornsgatan, the intense sound waves generated by buses, cars, bicycles, motorcycles, trucks etc. create a sonic wall that separates one side of the street from the other, though the visual connection remains. On the sidewalk, as you move away from the street, noise levels decline as the distance to the dominant sound generators increases.

Bysistorget is a recreational and often sunny oasis for this neighborhood. A sense of sonic and visual relief is evoked as you approach this area from either direction.

#### High-intensity sonic situation



A route of transition and possible positions of experience



### Key to spatio-sonic illustrations

- High and persistent sounds generated on site by traffic
- Background sounds generated at a long distance by human, nature, animal or technical activities
- Low-intensity sounds generated at a short distance by human, nature, animal or technical activities
- Abrupt change between low-intensity and high-intensity sounds (blue = background sounds, red= high-intensity and persistent sound coming from traffic, black= the corner of a building)
- Sounds generated by someone moving or standing still at a possible position of experience (clothes rustling, talking, breathing, walking etc.)
- Sounds generated by commercial, service-related, cultural or other activities at the ground level of a building, for example people moving in and out of a store or restaurant producing a high level of man made sounds at a specific point.
- A possible position of experience
- A route of transition
- Gradual transition between high, persistent sounds and low-intensity or background sounds

In the courtyard known as Bysis, the physical, functional and situational conditions creates a clearly distinguishable sonic contrast compared to the busy road outside the gateway. It is only a matter of a distance of twelve meters, but the sonic climate abruptly changes and affects the behavior of those using the space, proposing a site for rest, relative calmness and social interaction.



# Site: Salvation Army Quarters

## Description:

Site with street canyon character between two nodes. Residential area, well utilized by both pedestrians and motor vehicle traffic.



Visual, sonic and textual observations,



## Spatial quality

### Architecture

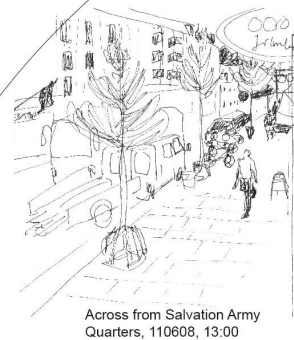
- Spatially non-variegated site with street-canyon character.
- 5-6 story buildings from 20<sup>th</sup> century and forward.

### Topography

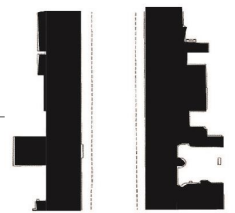
- Flat ground, with a slight incline.

### Materiality

- Hard materials (asphalt, pavement, facades).



Morphologic plan and section:



Color index describing observed qualities of space and sound:



Hornsgatan/  
Salvation Army Quarters

Medium and high-intensity sonic situation, mineral and solid materials



## Contents

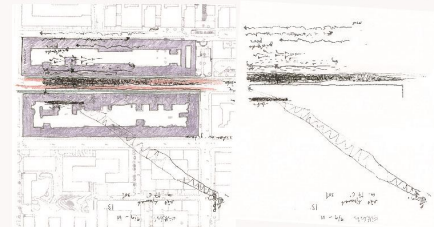
### Activities

- Transitional site.
- Intense pedestrian use of public outdoor space.
- Traffic dominates.
- Commercial and service-related activities.
- Cultural activities (theater, church, dance hall, gambling house).

### Functions

- Transportation and commercial functions dominate the site at street level.
- Cultural institutions (theater, church, dance hall/music scene).
- Residential area.

Sound notation from the transparency inventory, 110909, 13:00



Sound recording  
110909, 13:00

## Temporal features

### Sound quality

- Predomination of high-intensity sounds (traffic).
- Temporal breaks of relative silence.
- Less-dominant sound qualities coming from street life activities are existent and fill out the breaks of relative silence.

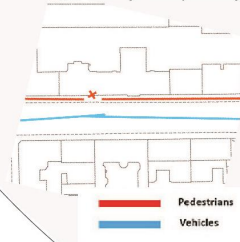
### Mobility

- The situation offers two options to move closer to or away from the site. No alternative walking routes exist.
- The possibility to influence one's distance to sound exposed parts of the street, is limited.

### Accessibility

- There exist two options for pedestrians to access the site.
- Accessing adjacent outdoor spaces containing contrasting sound qualities, is a non-existent possibility at this point.

Accessibility/ escapeability:



Mapped functions at groundplan, 2010, on an excerpt of the sociotope map



Referential  
noise map

Equivalent sound level dB (A)

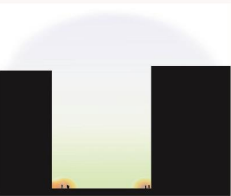
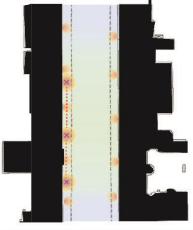
70 <	≤70
65 <	≤65
60 <	≤60
55 <	≤55
50 <	≤50
45 <	≤45
40 <	≤40

# Qualitative sound analysis

## descriptions and analyses

### Spatio-sonic illustrations:

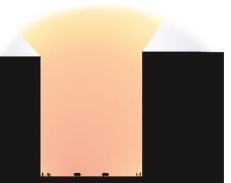
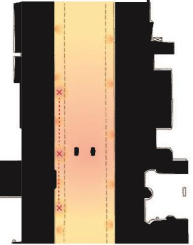
Low-intensity sonic situation



A route of transition and possible positions of experience

This part of Hornsgatan between Bysistorget and Zinkensdamm has the typical features of a street canyon. High blocks and fairly narrow street space (ca 24 m) hosting a plentitude of small businesses, shops, a theater and the Salvation Army. Above street level the buildings contain mainly apartments. The area is well-frequented by people living, working or visiting the area and together with the constant stream of cars, buses and trucks, it hosts a vibrant urban quality. However, the physical outline of the built environment together with the amount of loud sounds on the site, makes it into a highly exposed situation in terms of sound quality.










High-intensity sonic situation



A route of transition and possible positions of experience

Here, sound levels are high and the area can be classified as problematic in terms of sound exposure during a large part of the day. The flow of heavy vehicles generates a sonic wall that masks minor sounds, and often it is impossible to hear what is taking place on the opposite side of the street even though we can see the activities that generate them. However, in the short breaks in the waves of traffic, we can distinguish a plentitude of sound events coming from people and their actions from all around the area. The site-specific activities, both indoor and outdoor, in the area are numerous and add a contrasting sound quality to the prominent domination of traffic sounds in the neighborhood - when possible.

### Key to spatio-sonic illustrations

-  High and persistent sounds generated on site by traffic
-  Background sounds generated at a long distance by human, nature, animal or technical activities
-  Low-intensity sounds generated at a short distance by human, nature, animal or technical activities
-  Abrupt change between low-intensity and high-intensity sounds (blue = background sounds, red= high-intensity and persistent sound coming from traffic, black= the corner of a building)
-  Sounds generated by someone moving or standing still at a possible position of experience (clothes rustling, talking, breathing, walking etc.)
-  Sounds generated by commercial, service-related, cultural or other activities at the ground level of a building, for example people moving in and out of a store or restaurant producing a high level of man made sounds at a specific point.
-  A possible position of experience
-  A route of transition
-  Gradual transition between high, persistent sounds and low-intensity or background sounds

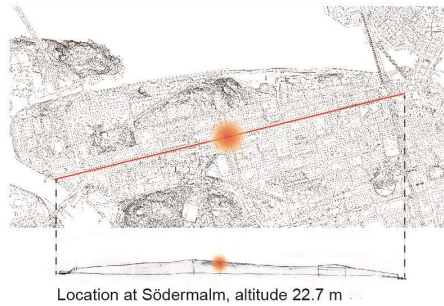
The site hosts a range of functions and activities within this spatially dense and narrow outdoor space. These specific features conditions how someone standing at the street is exposed to the existing sound qualities coming from sound events taking place on site, low-intense as well as high-intense ones.



# Site: Zinkensdamm

### Description:

**Communicational node/  
junction. Residential and  
recreational area.**



## Spatial quality

## Architecture

- Spatially variegated site in terms of openness/closeness.
- Junctional point.
- Four-way crossing surrounded by 5-6 story buildings.
- Near popular recreational spots (sport and nature), visual connection.
- Ringvägen is wider (48 m) with esplanade quality.

## Topography

- Change of ground level at a distance, (towards the Peak and Skinnarviksparken), otherwise flat.

## Materiality

- Hard and soft materials mixed (grass, trees, stonewall, asphalt).
- Nature and sports arena nearby.

## Contents

## Activities

- Medium-intense pedestrian use of public outdoor space.
- Transitional site.
- Traffic dominates.
- Recreational activities nearby.

## Functions

- The dominating function of the site has a transportational and transitional character.
- Commercial, business and service-related functions are sparse, but existing.
- Residential area.

## Temporal features

### Sound quality

- Predomination of high-intensity sounds (traffic).
- Temporal, fairly long breaks of relative silence.
- Less-dominant sound qualities are existent, but not numerous.

## Mobility

- The site offers several options to move closer to or away from its most sound exposed parts.
- Possibilities to influence one's distance to various spatio-sonic qualities in the area exist, but require a short distance walk.

## Accessibility

- There exist several options for pedestrians to access the site.

Visual, sonic and textual observations,

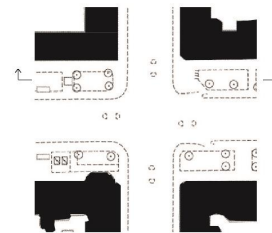


Video recording  
360°, 101111, 12:00

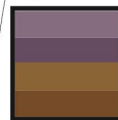


110609, 10:00

Morphologic plan and section:



Color index describing  
observed qualities of  
space and sound:



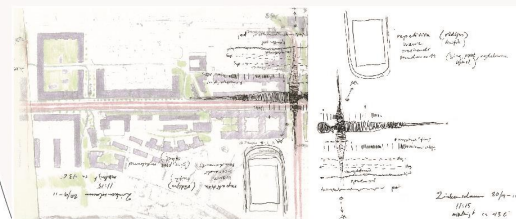
## Zinkensdamm

Intense/ High-intensity sonic situation,  
mineral and solid materials

Intense/ High-intensity sonic situation,  
soft and porous materials

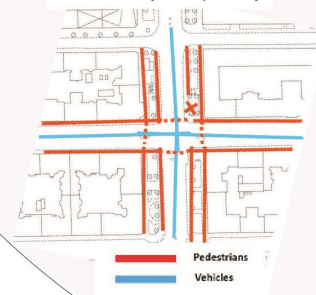


Sound notation from the transparency inventory, 110920, 11:15

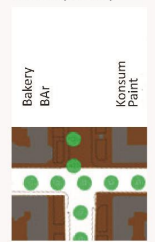


Sound recording  
110920, 11:15

Accessibility/ escapeability:



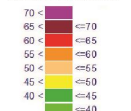
Mapped functions at  
groundplan, 2010,  
on an excerpt of the  
sociotope map



Restaurant  
Bar  
Restaurant  
El-store  
laundry  
Drugstore  
Gushi  
second hand

Referential  
noise map

Equivalent sound level dB (A)



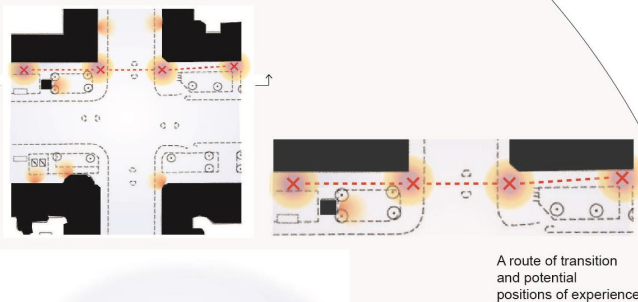


# Qualitative sound analysis

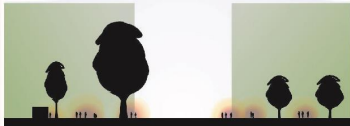
## descriptions and analyses

### Spatio-sonic illustrations:

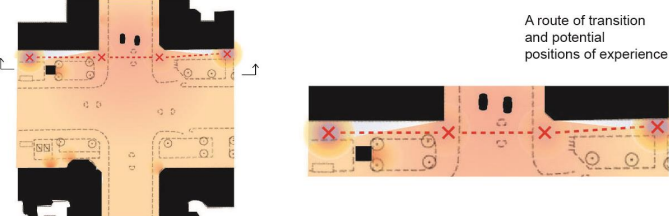
#### Low-intensity sonic situation



A route of transition and potential positions of experience



#### High-intensity sonic situation



A route of transition and potential positions of experience



#### Key to spatio-sonic illustrations

- High and persistent sounds generated on site by traffic
- Background sounds generated at a long distance by human, nature, animal or technical activities
- Low-intensity sounds generated at a short distance by human, nature, animal or technical activities
- Abrupt change between low-intensity and high-intensity sounds (blue = background sounds, red = high-intensity and persistent sound coming from traffic, black = the corner of a building)
- Sounds generated by someone moving or standing still at a possible position of experience (clothes rustling, talking, breathing, walking etc.)
- Sounds generated by commercial, service-related, cultural or other activities at the ground level of a building, for example people moving in and out of a store or restaurant producing a high level of man made sounds at a specific point.
- A possible position of experience
- A route of transition
- Gradual transition between high, persistent sounds and low-intensity or background sounds

Zinkensdamm is a site of constant communicational activity as it hosts a four-way junction, a stop in the underground metro system and it is node for pedestrians. Traversing Hornsgatan, Ringvägen leads to open air green spaces such as the rocky park of Skinnarviksparken at the northern edge of Södermalm and the vast parklands of Tantolunden to the east. A 360-degree view of Zinkensdamm would reveal giant elms that tower above the traffic lights at three points, while to the north, Ringvägen opens up into a site with a square-like character.

A grocery store in one corner, a restaurant and a bar in two of the others as well as an entrance to the metro and a kiosk including some shops and boutiques of various kinds.

The site is dense in terms of sound. Ringvägen is an important traffic vein connecting Hornsgatan with the south-bound roads of Skanstull. A vast amount of vehicles turn around the south/east corner of Hornsgatan, either driving upwards towards the peak continuing to Hornstull and the bridges of Västerbron and Liljeholmsbron, or coming from the opposite direction, heading for Mariatorget and Slussen. From a sound point of view, Zinkensdamm is characterized by a constant wave-motion of sound during daytime, oscillating back and forth between high and low-intensity sound qualities.

Being a four-way crossing, the sound quality is not ideal. Low frequency sounds with high intensities dominate the area as a whole, even though other activities and sound are present on site. There are several ways to move along in either direction and to put some distance between yourself and the sound generated by such heavy traffic.

Two paths lead towards contrasting sonic environments (parks, sports-arena for example), that are to be found within a close distance.

Sightlines stretch far away at this point. The visual connection with distant objects makes the site both illuminated in terms of light and interesting from a visual perspective as the attention can be drawn in various directions and shift focus from the aural system to other senses.

In this sense the site of Zinkensdamm can be regarded as spatially interesting from a visual point of view, but rather monotonous, exhausting and uninteresting from a sonic perspective.

