01 RESEARCH
01.1 The site
01.2 The instruments

02 PROCESS
02.1 Investigations
02.2 First proposal
02.3 Second proposal

03 FINAL PROJECT
The site is situated on the west side of Bjørvika, a central harbour area in Oslo which in the past 20 years has been subject to heavy development. The area around the site is characterized by a lack of structure, large open spaces and barriers inflicted by infrastructure and traffic. At the same time the site is centrally placed close to important historical areas, new cultural institutions and close to the waterfront.
A central part of the strategy for urban spaces in the harbour area is a harbour promenade and a number of new parks. One of these parks, that still is unrealized, is planned partially on the site, stretching down to the waterfront. The park is intended to continue the direction of the existing Grev Wedels plass towards the fjord. The harbour promenade runs along the waters edge from Bjørvika by Vippetangen and Aker Brygge to Bygdøy further west.

The site lies at a crossing where four distinct urban structures meet:
- To the north the historical grid axis structure with perimeter blocks.
- To the west lies Akershus fortress with scattered structures and fortifications.
- To the south lies a port for larger vessels, with international ferry and cruise traffic.
- To the east lies the Bjørvika area with the Opera, the new Munch museum and central library.
Several important pedestrian routes run past the site. People moving between Bjørvika, Akershus festning and Aker Brygge or between the central station and Vippetangen are highly likely to pass by.

Key elements to consider:
- The continuation of the existing park towards the fjord
- The heavy infrastructure and the noise and barrier effect it poses.
- The large scale of the situation
In the past decade the infrastructure in the area has undergone significant restructuring with new tunnels being put in place to move traffic away from the Bjørvika area, but still the roads leading to the tunnels have significant traffic. The road bordering the site towards southeast is trafficked by an estimated 11,000 vehicles daily – other surrounding roads have similar levels. This makes noise a significant challenge. The tunnels also pose a central challenge. The main part of the Opera tunnel runs underneath the south end of the site, with a branch going underneath the site towards north.
Historical development – The flexible water line
The site seen in direction towards Akershus fortress

The site with Havnelageret, The new Munch museum and the Ekeberg ridge in the background.
The collection I have chosen to work with belongs to the Norwegian conservatory for music. Primarily it comprises of objects donated to the school in 1971 by the professors Trygve Lindeman (The Norwegian Conservatory for Music) and Olav Gurvin (The University of Oslo). The collection is large and contains several important objects, both in a national and international scope. In total the collection numbers about 600 objects varying in size and origin. It ranges from 19th century English parlour pianos to African Sansas – Viola de Amores to human shaped rattles.
Filecard system with individual cards for each instrument in the collection made in order to be able to relate to the great number of objects.

Based on different criteria such as historical significance, beauty, type and size I selected 133 instruments that I would base my exhibitions upon.
The 133 selected instruments
Working with the file cards system – Cards arranged to investigate relationships in size, character etc.
Diagram made in order to understand the typical way of categorizing instruments in ethnomusicology.
I imagine a museum for acoustical musical instruments as a place where you could experience the instruments visually as well as audibly. However, the paradox of such a museum is that the instruments can’t, due to their fragile state, be used to make the sound that is their most important characteristic. Therefore, in addition to various audio technical solutions in the exhibitions, I have wished to make a building where “musicing” could take place alongside the instruments on display.
I started investigating specific spaces for each instrument or instrument groups, the intention being to facilitate intimate meetings between object and person.
Sketches on how to organize a multitude of smaller spaces around a core that could be used for musical performances.
Studies for different exhibition strategies

It soon proved difficult to find something specific for so many instruments with very different character. I also concluded that if there is any general characteristic to the instruments it is that they are social beings. At the same time I wanted to avoid the unpersonal treatment of the objects typically represented by museums where the morphological relationships between things is showed. I wanted to show the personality of the objects while still letting them be together.
I started early to establish a grid as a strategy to take the loads to the ground without touching the tunnels.
Investigations on plan concepts related to the grid and the intention of a central space, testing them against the instrument sizes investigated earlier. The intention being to find a way to lead people close to the instruments and subdividing a continuous undulating space.
I decided on a concept to develop further – A circular plan with a shifted inner circle fitting within the square of the grid spanning the tunnel with arches.
- A cylindrical building with arches taking the loads down beside the tunnels.
- Public ground floor relating to the outside spaces formed on each side of the building.
- Initially intended as a freestanding object in the park but it soon became apparent that it was difficult to manage the entire program within the shape. As a consequence the administration placed in a separate volume, defining a back courtyard.
- Exhibitions on first and second floor with central atrium between.
Ground floor
The protective museum – Study for a concrete façade
In order to eliminate traffic noise within the exhibition space the structure needs to be heavy.
The spanning needed in order to bridge the tunnel also speaks in favor of a concrete structure.

After having worked on this concept for a while I concluded that it didn’t perform as I wanted:
– It didn’t structure the site
– The form proved to be rigid and difficult to work with on the relatively narrow site.

Interior study for a curved space with vitrines as spatial dividers bringing you close to the instruments.
I started the gradual transition from the circular form by revisiting some of my previous studies. By working with a different outer and inner shape I hoped to find some qualities in the intersection between the shapes.
– Open columnless ground floor offering another route along the busy walkway.
– Museum floor spans across the first floor.
– Stair leads up into central atrium as before.
– Exhibitions on first and second floor with central atrium between.

I left this strategy because the leftover inbetween spaces turned out to be too small. Also the exhibition spaces still were very rigid with little spatial variation. In addition the structural concept was still very unclear and the vertical connection relationship between first and second floor felt unresolved.
03 FINAL PROJECT
The transition into what developed into the final project came as a response to a wish to answer certain criteria that I didn’t achieve in the previously described attempts:

– Achieving a clear structural concept that relates to the site, both under and over ground
– Creating a central space that is believable in terms of creating the sought after social space that can function as a concert space and have a clear spatial character
– Finding a consistent strategy to connect different functions both vertically and horizontally, inside and outside.
– Creating a circulation in the museum that relates to a centre while at the same time offers varied, beautiful spaces.
Situation modell 1:500
Section modell 1:50
Collage from atrium looking southwest
Diagrams for how to organize the instruments in plan
Family of vitrines
From left to right:
Sound shower, Adjustable table vitrine,
Tall narrow vitrine for hanging objects, Large adjustable cabinet vitrine,
Slim, adjustable cabinet vitrine, extra large vitrine for floor standing objects,
Medium adjustable cabinet vitrine, Hanging mono hand-size loudspeaker.

The intention of the vitrine strategy is that it can be added on and altered when needed. Objects can be showed with or without glass.
Section modell 1:50 Second floor northeast corner
Third floor 1:100
Section modell 1:50 second floor south corner
Collage from basement
Section AA 1:100
Photo modell 1:30 of main staircase.
The staircase is hung from the wall-beams above, the interior of all the double wall-beams is concrete laquered with pigmented french polish.
Foldable concept model 1:100
Axonometric showing construction. The walls acts as tall beams spanning across the tunnels and the open ground floor. The first floor walls spans between the fundaments.
Plaster study modell showing the curvature in the facades