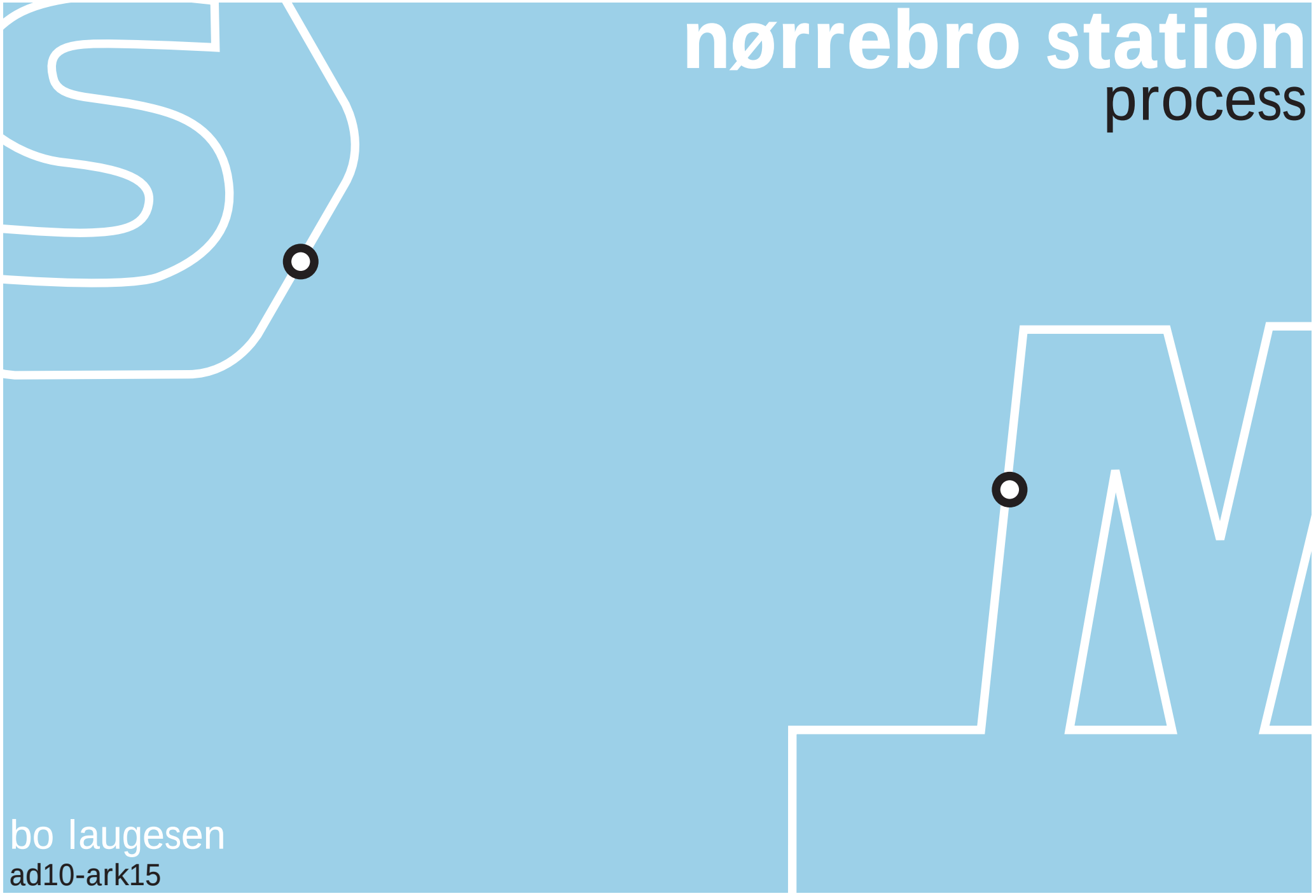
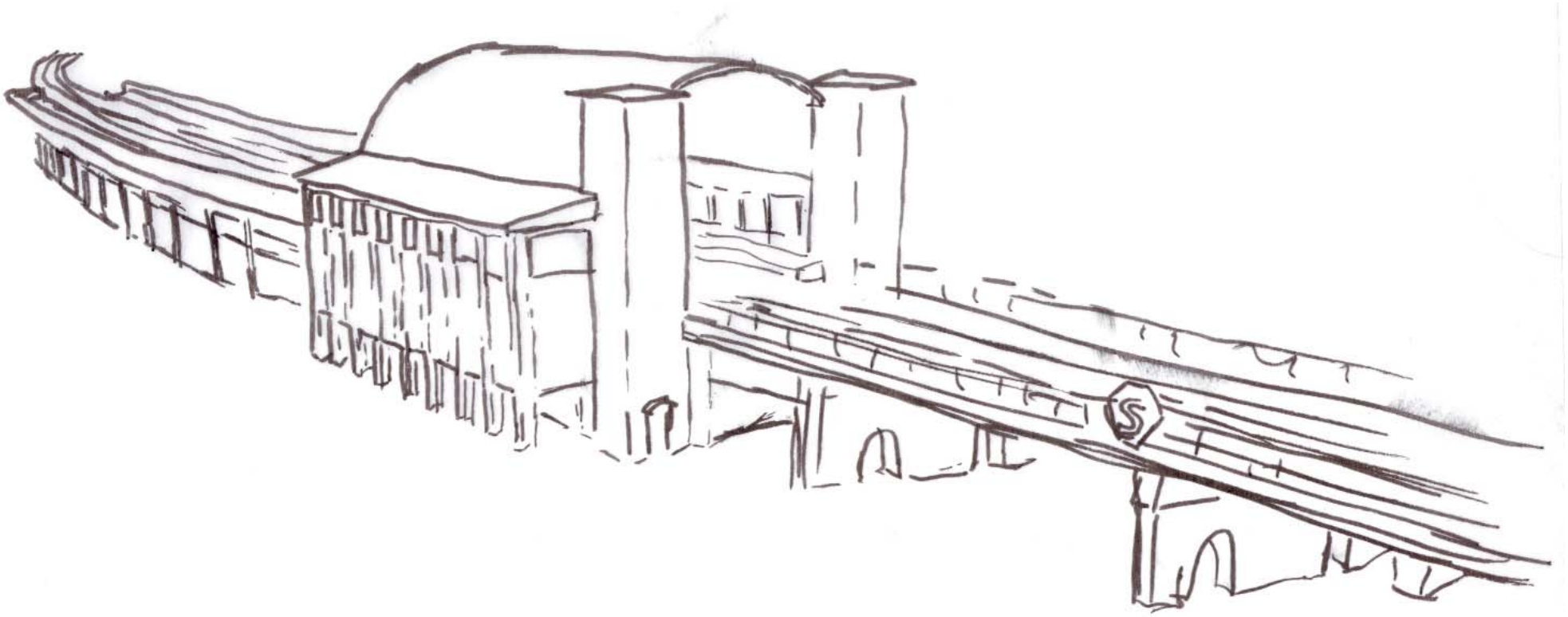
nørrebro station
process



bo laugesen
ad10-ark15

foreword



The process of the project from initial ideas and proposals to the final proposal. It also contains different excersises and studies along with additional analysis. The process starts right after the program working with the problems, ideas and spefications raised in the program and will lead to the presentation following directly after. It also includes various structural considerations and results of these.

content

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will be written after the process

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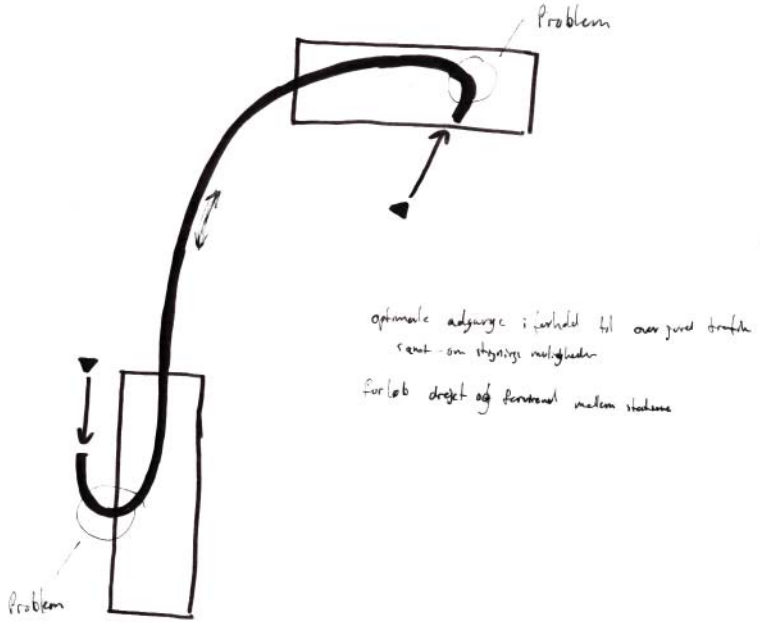
corridor with shops

The first thought for connecting the two stations was a simple corridor with shops along it. A simple thought and a start on the project. The idea was taken from the existing metros around the world where efficient tunnels are dug under the city to connect various stations and functions.

The first attemps was to find a logical connection based on the existing stations that has entrance in one end. The corridors was meant to connect through these.

The illustration below shows the logical angle of the entrance according to the proposed suggestion shown on [...] and the streets. The illustration shows how this approach will create an odd s-shaped line of transit.
The idea of a simple single connection between and through the stations seemed to be unrealistic. Although a few attempts was made as shown on the next page.

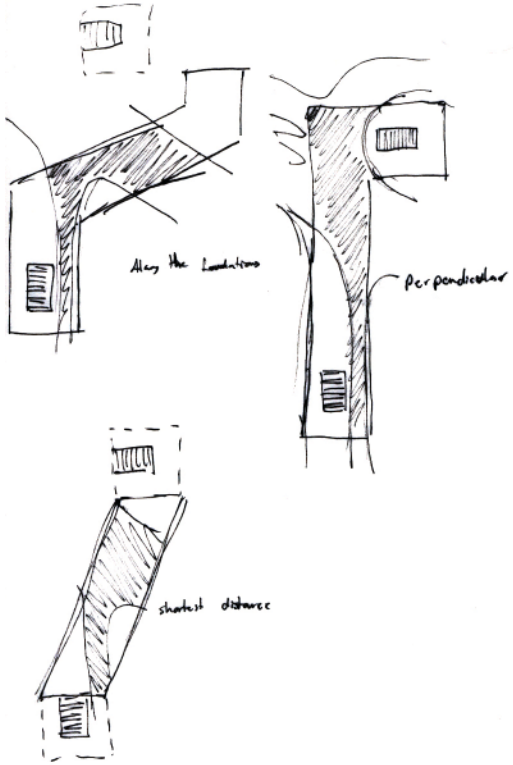


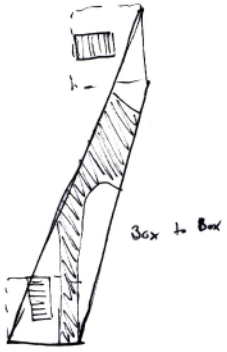
The illustrations below are based on the shortest distance between the stations with the streets outlined for later proposal for lights. The idea was to use the limitations of the above structures, the station “box” and the possibilities for natural ligth in the corridor.

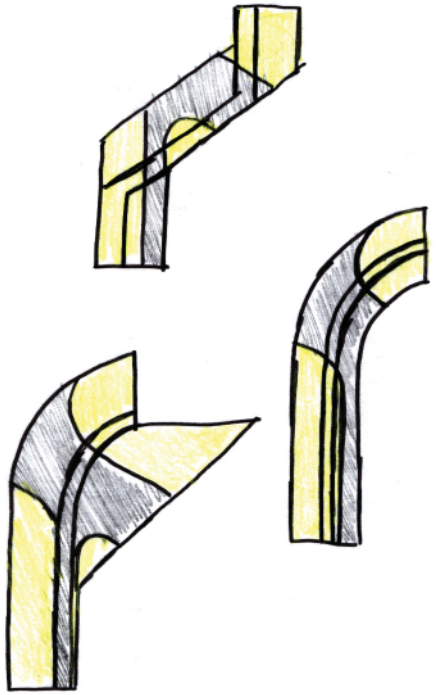
This approach created a very little and even boring space between the ends of the station boxes. It needed more.

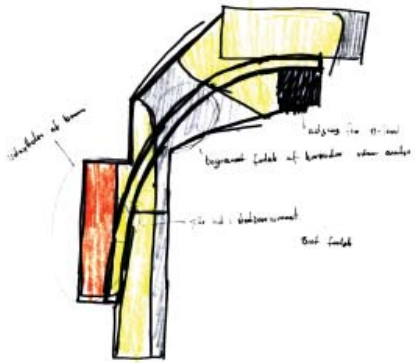
The last sketches shows the first attempts to create more space by breaking off to touch the station box in other places that the end.

In the end the idea of something this simple was rejected in order to create more space and to ensure a much more interesting project. Somehow the project had to reject some of the limitations.







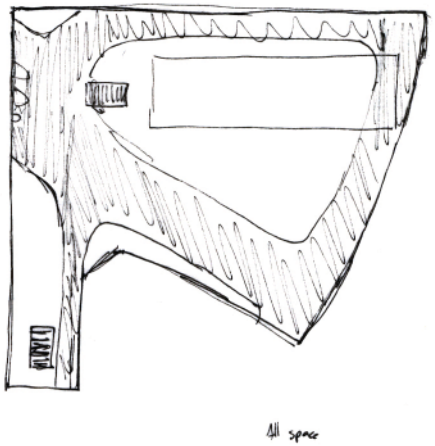


sketching

creating more space

In order to create more space the idea was to take the whole area of the Basar Site into use. The idea was to create a public space underground something that would give quality and a sense of space to the station instead of a narrow low tunnel between the two grand spaces of the stations. The area marked below is to show what area can be used.

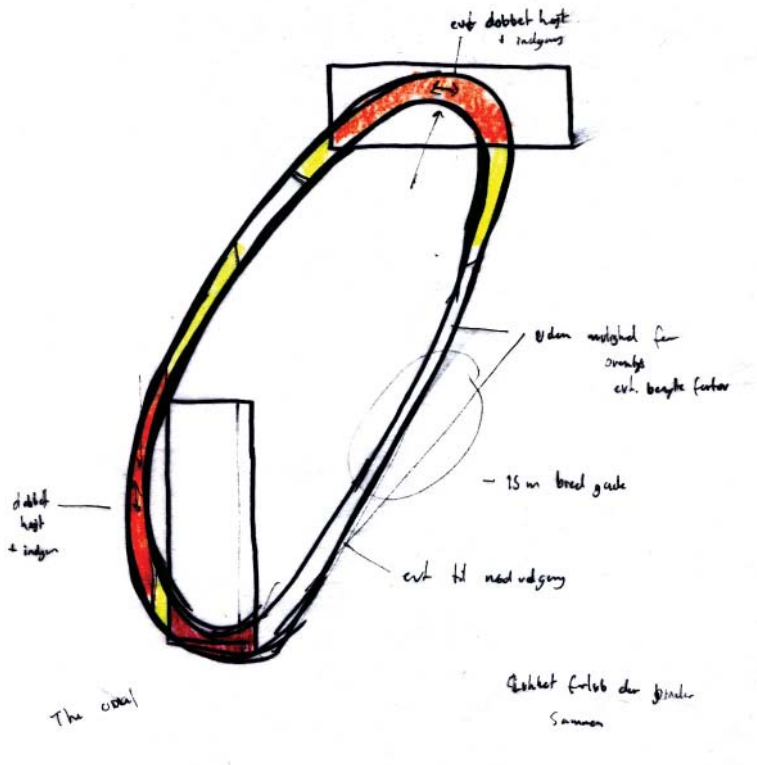
This again created a limited area and limited the possibilities and the creativity. Instead something less “locked” should be done.

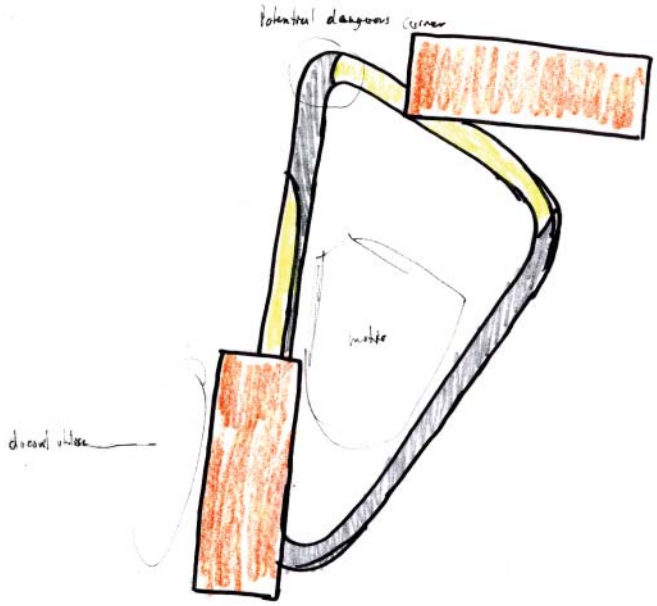


One of the first approaches was to create a shape that connected with the stations becoming part of the station and breaking the very statical and closed station box. The idea was to create a circular corridor avoiding the existing building above. This would create more space and give a strong motive and idea to the project.

Although this broke with the the straight corridor it still created a corridor with no logical stops on the circle.

A reason it was rejected rather fast was also the fact that it would be quit hard to secure natural light in the corridor for a large part as shown below where the red marks places with option of open space, yellow is possibility of day light and white are under streets. On the drawing on the left grey indicates the areas below streets.





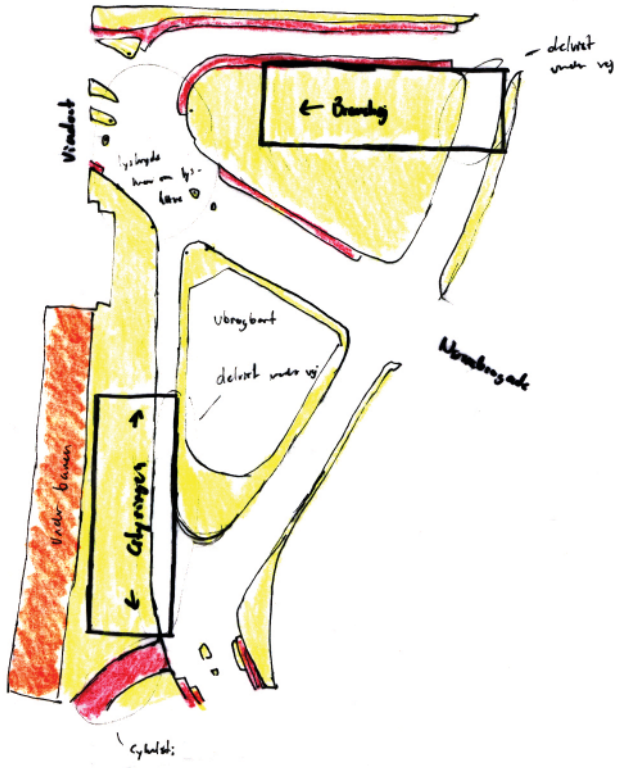
sketching

going under the existing building

Much of the process untill this point was slow and meant that alot similar or identical drawings where made.
Something had to be changed in the process to ensure larger freedom and interesting spaces.

Going back a little and with help from my supervisor it was decided to remove the limitations given by the Ring Building. The suggestions at that point had been going around the building and left the area under it alone.

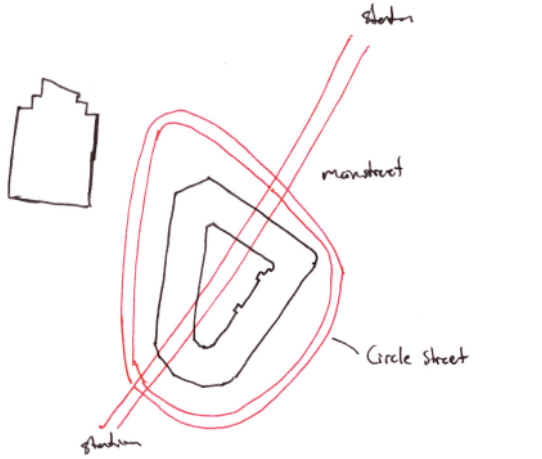
The illustration below shows how the area was a hole in the plans that was untouchable.



Begining to think of the area that was now open it presented some incredible possibilities given that it was placed directly between the stations and the Block structure meant it had an open back yard that presented a possibility of pulling light into the underground building.

Before this suggestion to use the space under the building the plans was very much like the above ground infrastructure with corridors following the streets and opening up for spaces where there was space. Much like seen in the dug-and-cover solutions in London and Paris.

This was an opportunity to break the above ground pattern by creating diagonal lines and a logical connection from station to station.



Source as above ground

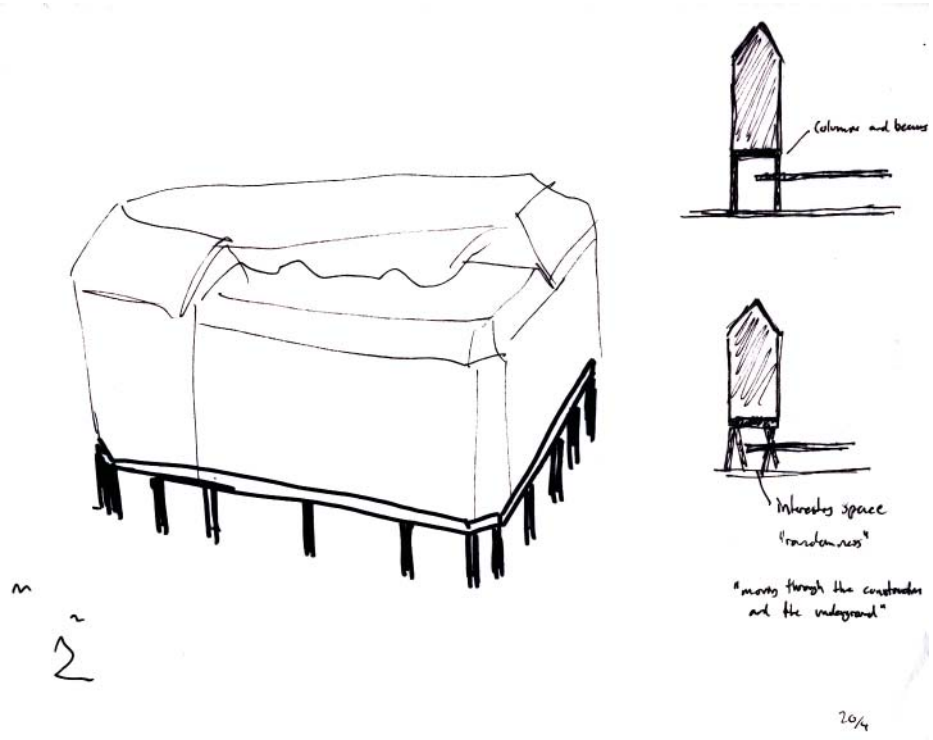
sketching

lifting the existing building

A concern of going under the building was how to keep the existing structure and still alow passage underneither. The prefered solution was to keep the basement of the building open and create a way of entering the space from the ground floor as well.
It became a priority to keep the floors open. This would give a sense of the building being lifted above the ground.

One solution was to draw back the facade of the ground floor and let all structure be placed in a ring centered under the building. This would give the effect of lightness.

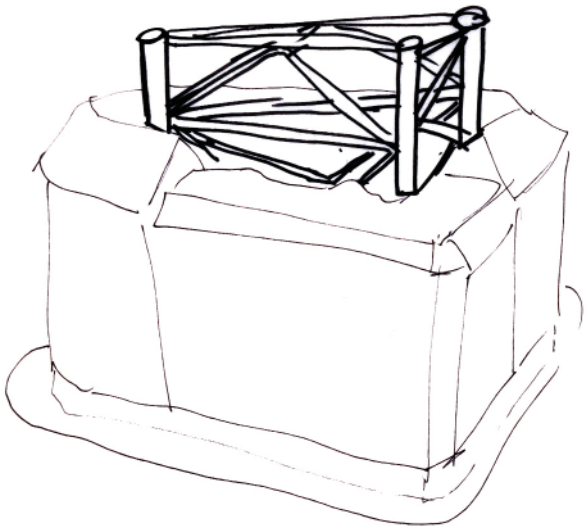
Another solution was to lift the whole building on columns that would go down to the underground floors making them present and part of the space, creating space even.

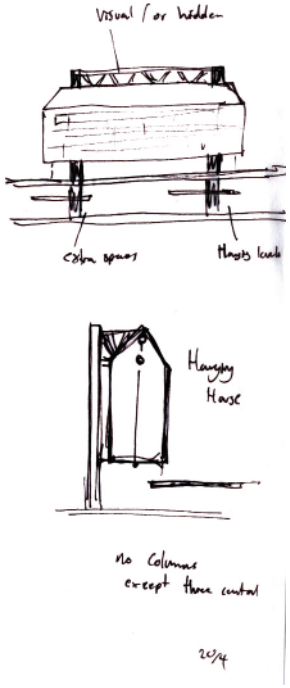


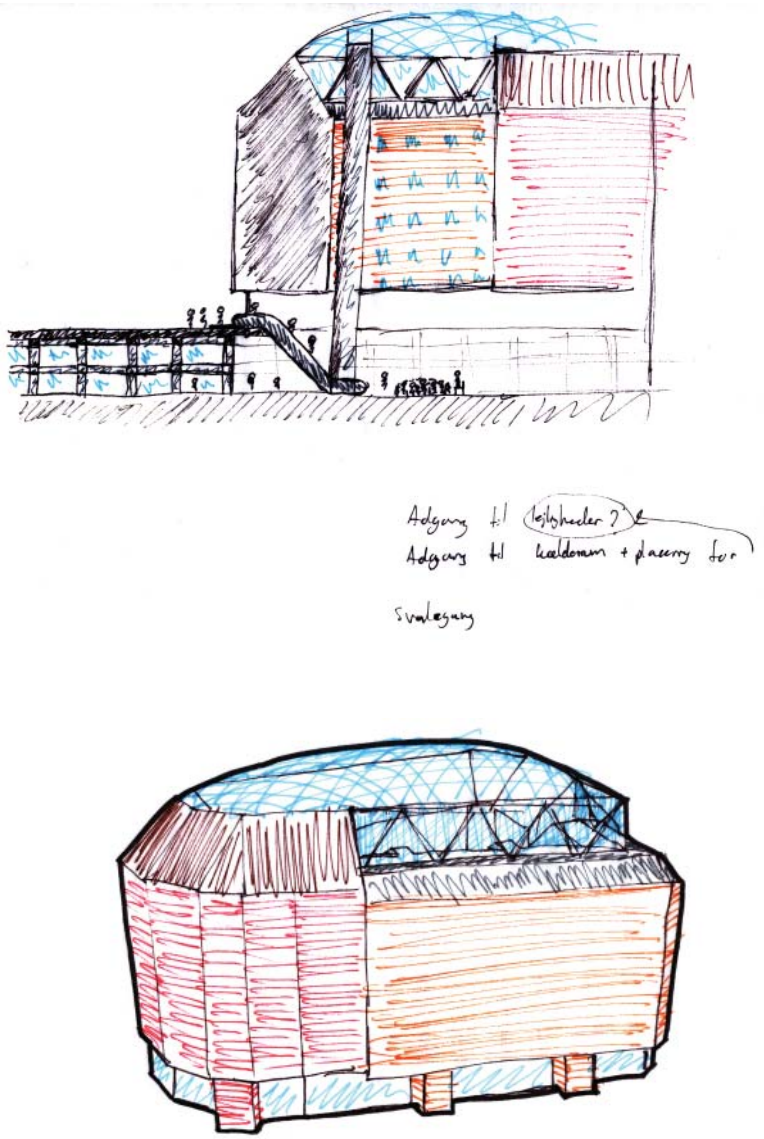
A solution that was taken a long way in the process was to lift the building on three mayor legs located in the courtyard of the building on which the whole building would be hanging. This would leave the whole building flowing over ground and make the three legs a huge part of the building and structure.

This idea of the structure being in the courtyard also threw off the idea of using the entire courtyard as an atrium as shown on the last two drawings. The courtyard would be covered in the top making the backside of the apartments part of the atrium.

After these considerations the thought of structural design was to be left alone untill the plans became more detailed.





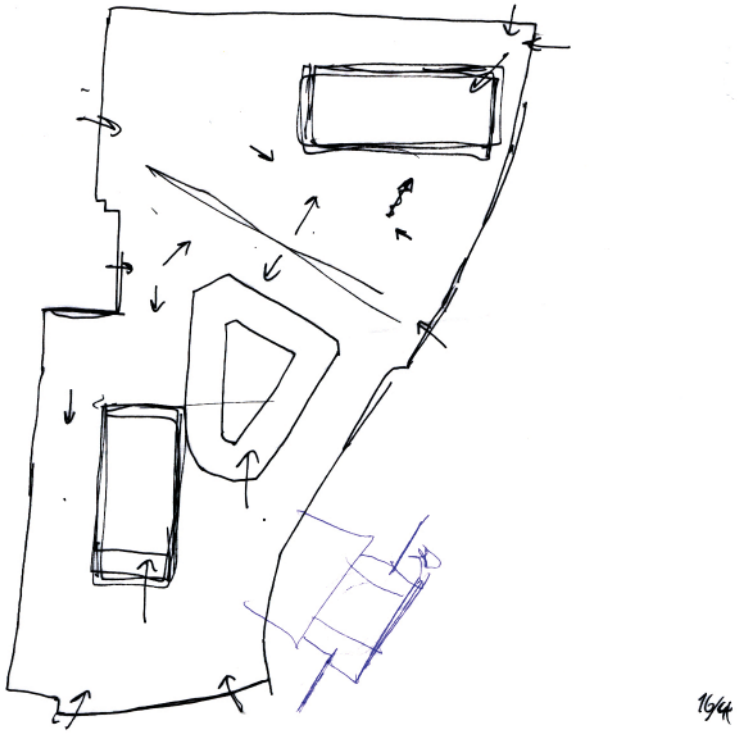


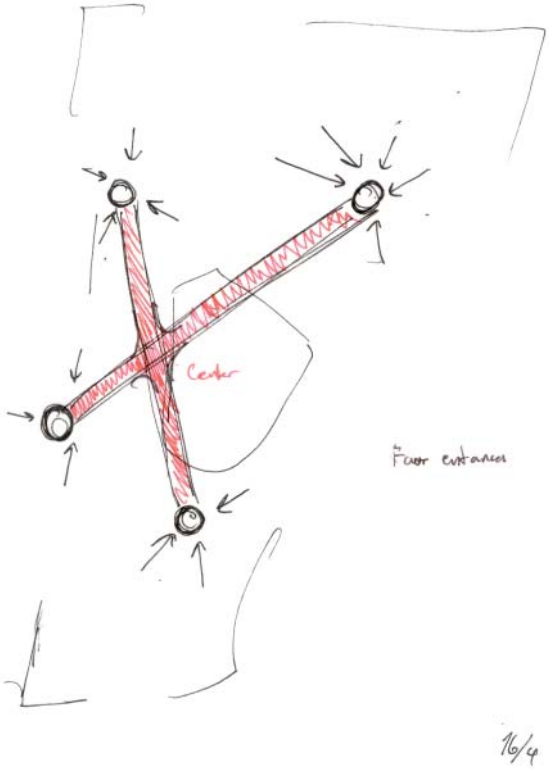
sketching
entrances

Given that the volumen and area of the building was growing there was suddenly the possibility to create more entrances.

The first drawing shows early attempts to locate various entrance possibilities based on the analysis in the program.

The second drawing shows an idea of four entrances and an investigation of the space between them compared to the Ring Building.
This solution(not depending on the location of the entrance or amount) would leave strong directions in the plans something that was further investigated.

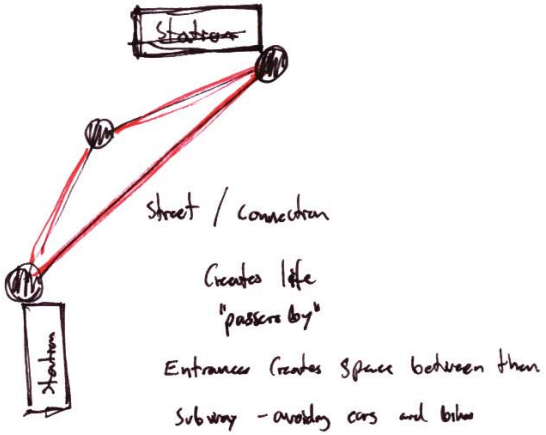


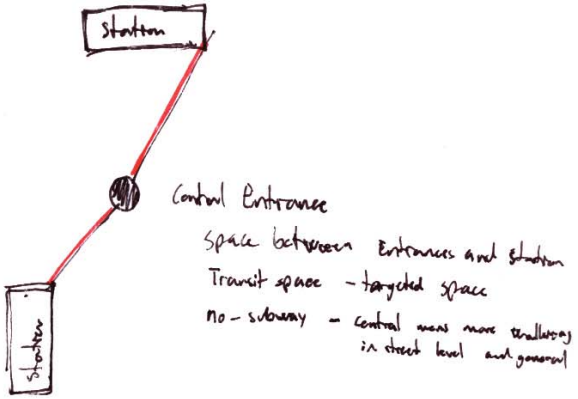


As with the first solutions the idea of the entrances creating directions would give a series of corridors creating the space.

But the space they create doesnt need to be corridors the entrances could mark the corners of a space rather than an end. This would be dependent on the location of the entrances.

The next phases of the process was to sketch these possibilities.





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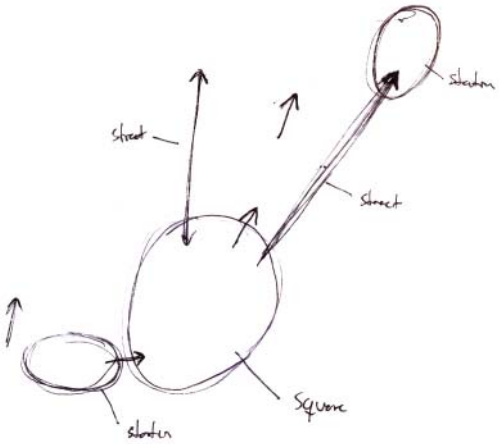

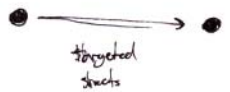

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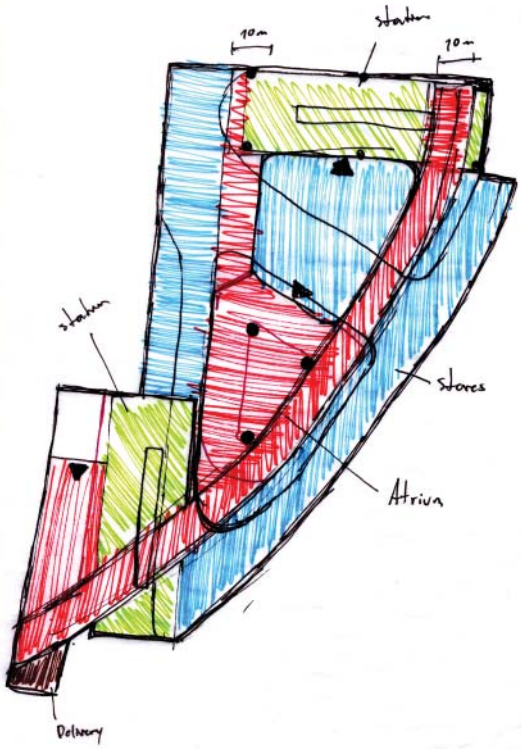
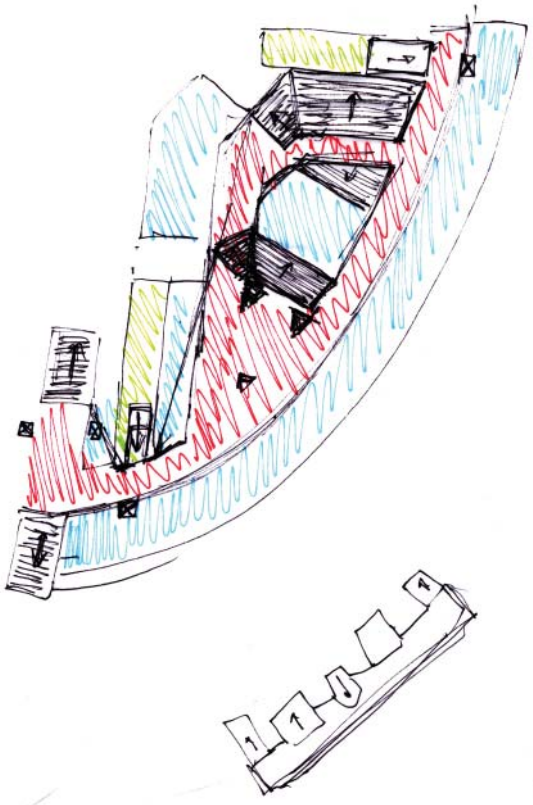
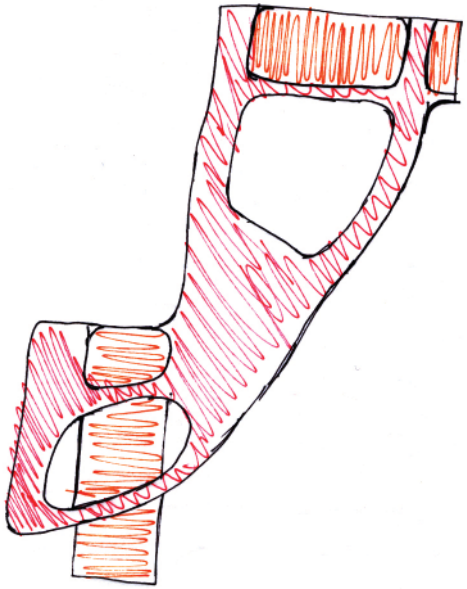
sketching
plans

These plans are part of the phase investigation how the entrances location can create space. The corridors in these suggestions follows the above building with connection to the entrances and stations and creating a square under the atrium of the Ring Building.

One of the mayor issues was the connection with the stations and the logic of the shape and how to get from the ground floor to the concourse level.
A mayor drawback of these plans was the corridors which was prefered to be avoided.
The central square function became a rather large part of the plan and the project from this point.

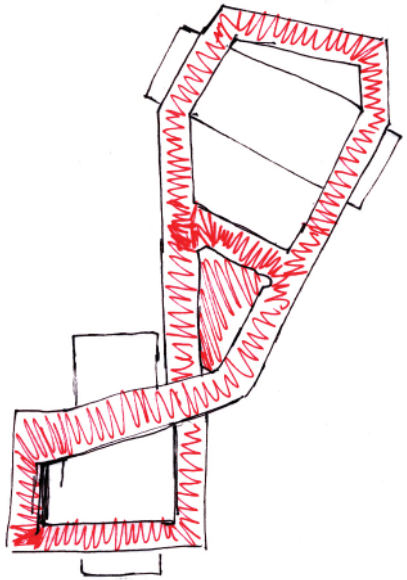


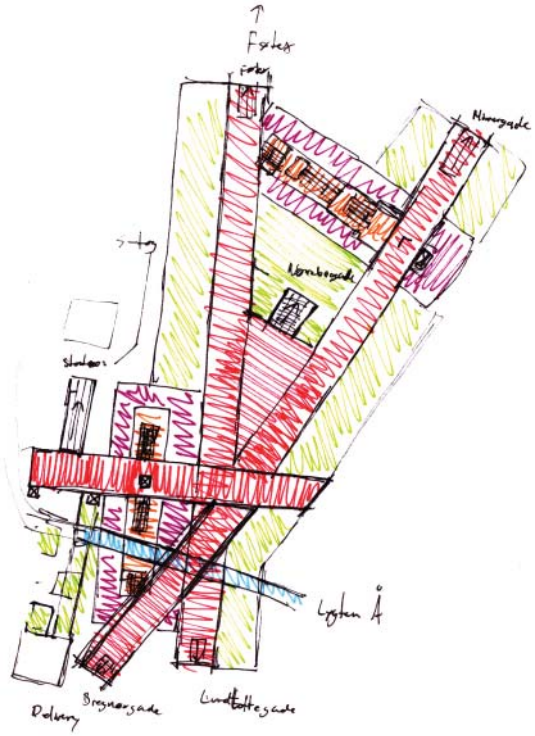


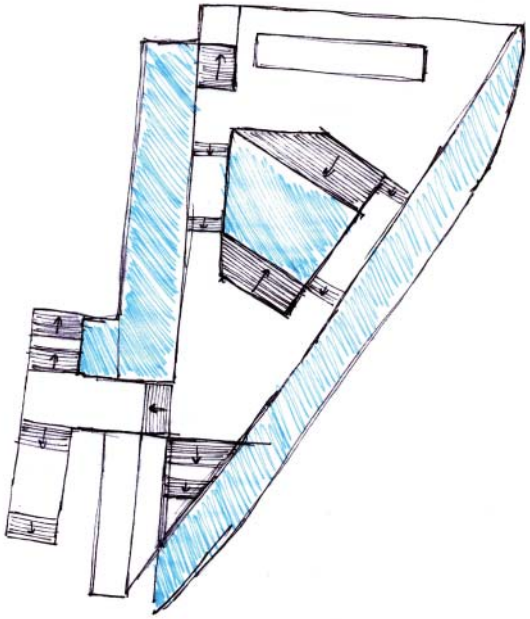


To create a more variating space and an experience that wasnt along corridors and ordinary spaces it was attempted to create more levels that would ínfluence the experience alot more than plain corridors. The below three drawings shows examples of this working with ramps, levels and stairs.

These ideas had no clear direction or concept and seemed to be disconnected from both the stations, the existing buildings and the street level.







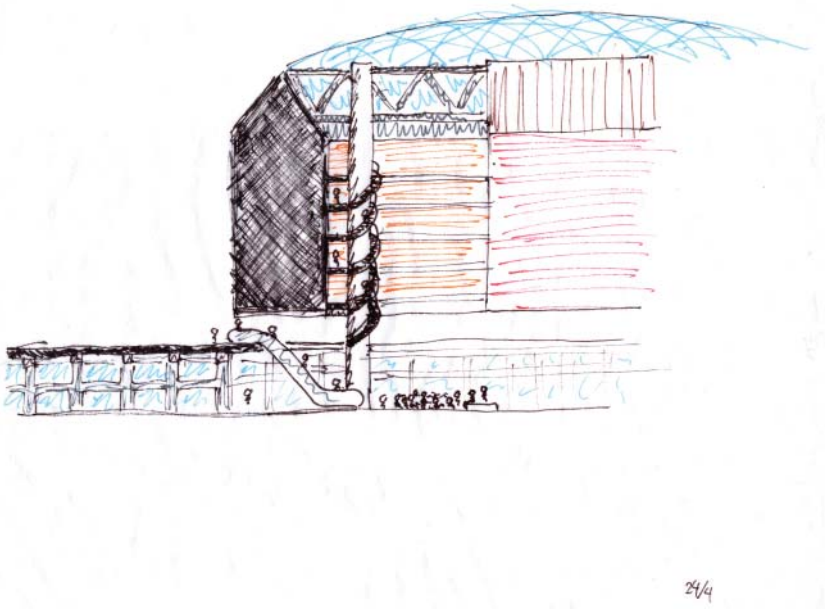
sketching
atrium

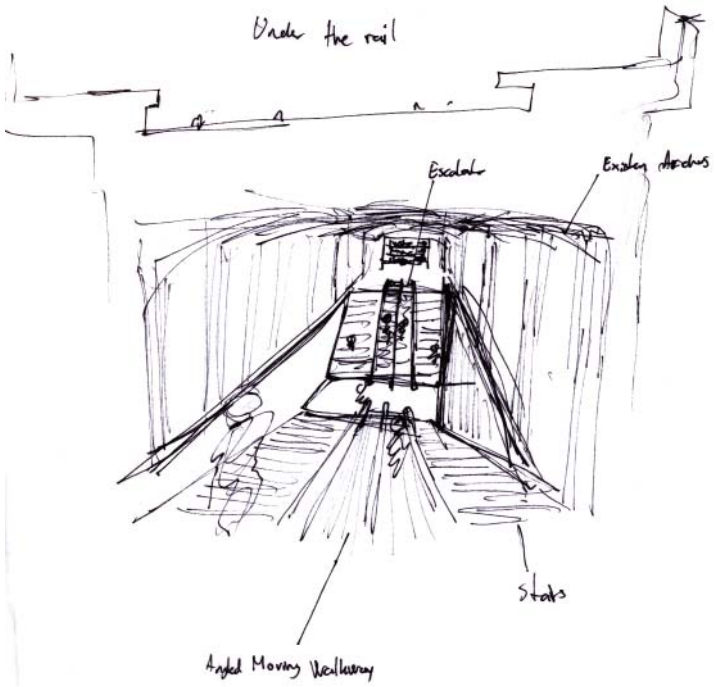
The atrium is the most important part of the project being the heart of the building and the most impressive view.

The first thoughts arrived with the thought of using the Ring Building as the grand atrium and a mayor light source.

The larger the atrium is the grander the experience.

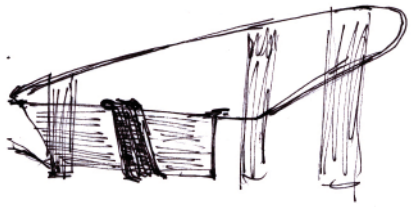
But this wasnt the only aspect of the project including an atrium. Early on some of the space under the S-train was decided to be a central access to the stations borrowing alitte from the existing project for the Metro Station as Nørrebro Station. This Atrium was to be nothing but access with clear connection between the S-train and Metro Station.

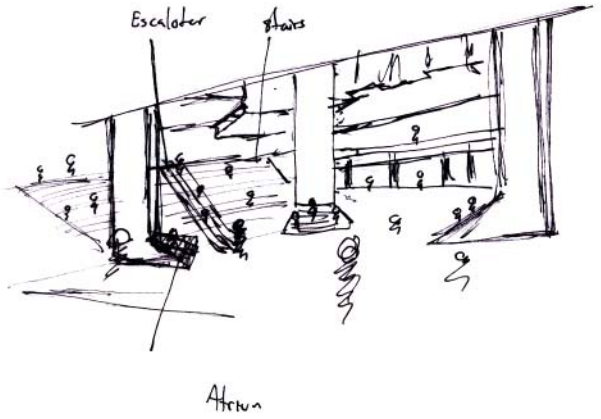




The Atrium it self was always meant to be one of the mayor access points. Not only was the idea to lead people through it. It was also meant to become an entrance. Much of the experience in the project was for a long time also placed here rather than the entire building. It was to be the heart.

But this function seemed detached from the rest of the project that worked with corridors and much smaller spaces.





sketching

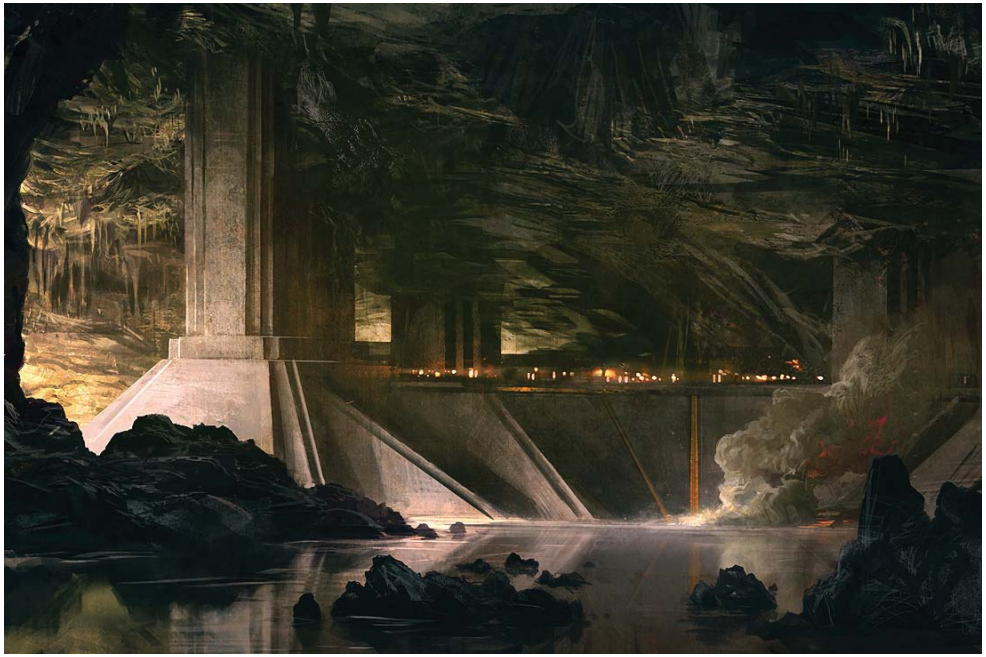
underground city

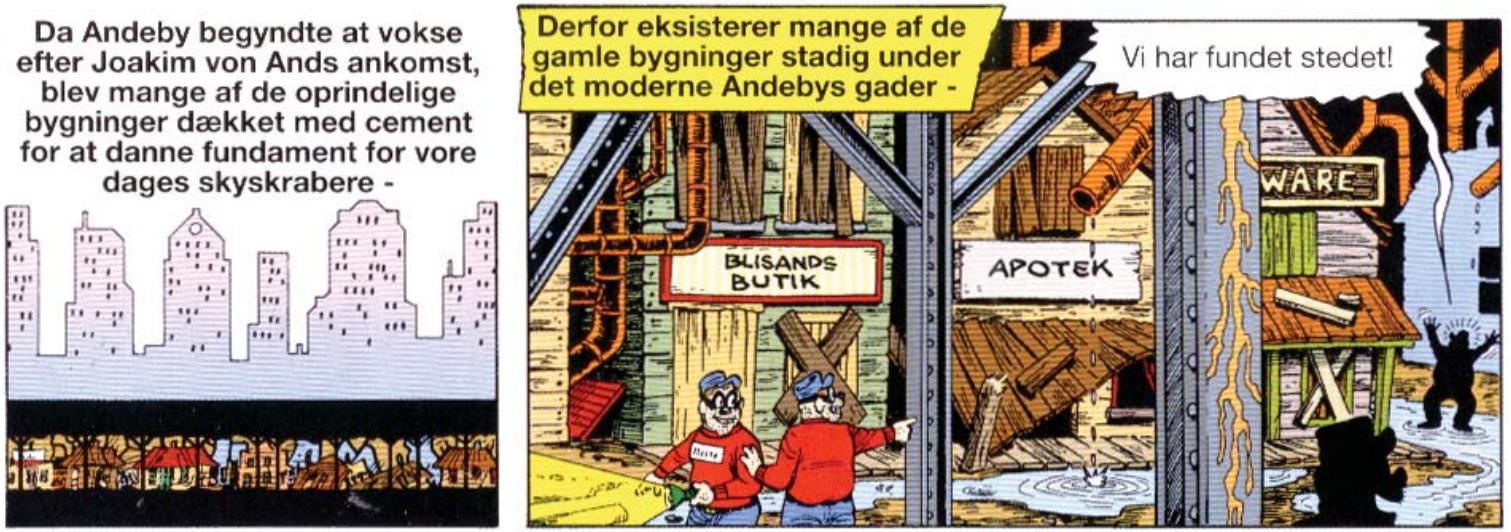
From the original ideas of a simple corridor the project developed into a much larger scale. A underground SPACE. Inspired by the fantasy world of Disney and such fantasy stories as Lord of the Rings came the idea of an underground city built around the pillars of the city. Even using these pillars to create space.

The below illustration shows a grand space in a cave. The space's experience is very much enhanced by the presence of the large columns holding up the caves roof.

The Scrooge McDuck illustrations on the other side shows how Duckburg's old houses was kept when the city was expanded and built above. The space is fascinating because it shows a space under and between the legs of the city, a space like the one above in the street.

These illustrations are fascinating showing spaces that are interesting and fascinating. The "wauw" effect.




Da Andeby begyndte at vokse efter Joakim von Ands ankomst, blev mange af de oprindelige bygninger dækket med cement for at danne fundament for vore dages skyskrabere -
Derfor eksisterer mange af de gamle bygninger stadig under det moderne Andebys gader -
Vi har fundet stedet!
BLISANDS BUTIK
APOTEK
WARE


Hva'? Bygninger? Gamle smuldrende træhuse...
ANDEBY KOLONIAL
ISENKRAM
Jamen... det er jo Andeby! Det oprindelige Andeby! Eller resterne af det! Sådan så det ud, da jeg ankom for 50 år siden!

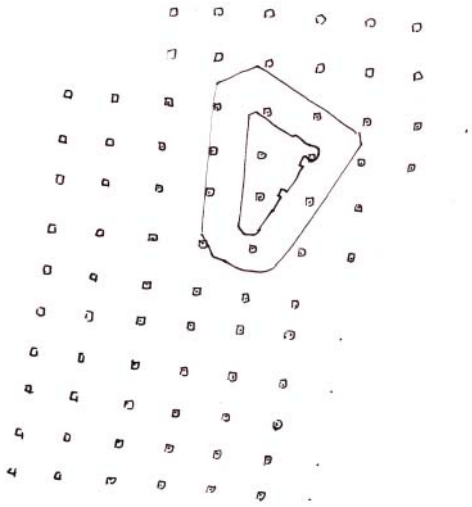
sketching

integrated structure

It was attempted to create a stronger concept by creating a structural plan on which all of the project could be developed. The first attempt was the following drawings based on a column-and-beam structure that would create a module system to create space from.

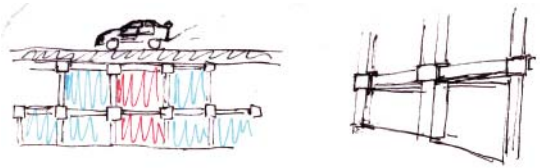
This would be the “under structure” of the city, what keeps the city floating.

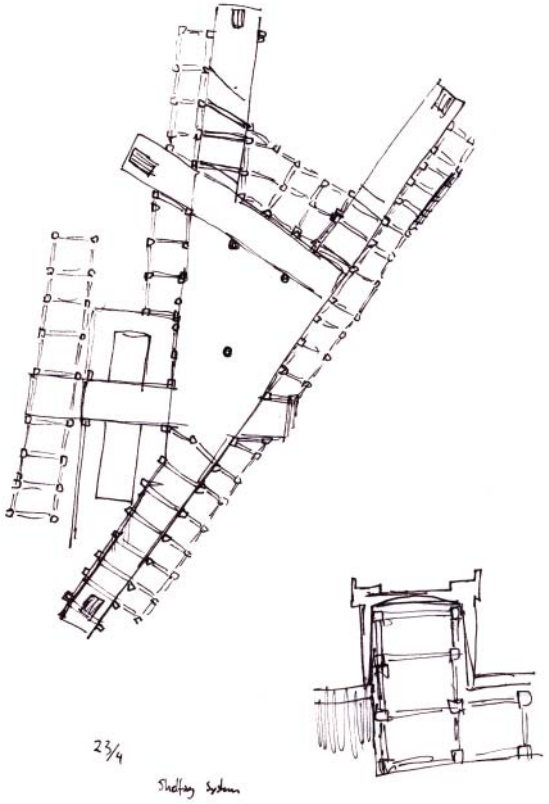
The idea was to create a two storey system around corridors based on a previous plan seen on the pages before.

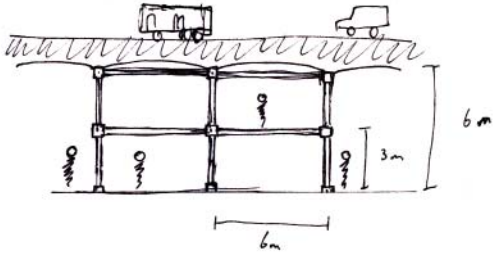


Although this suggestion was stronger and more logical in the approach to create space it lacked an experience other than the city underground.

It was also missing a connection to the legs of the Ring Building which was at this point still three legs in the court yard.







sketching

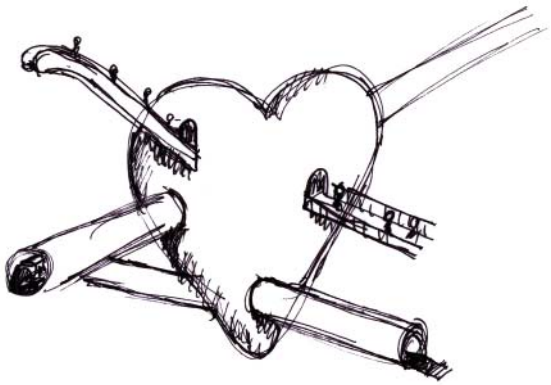
shaping

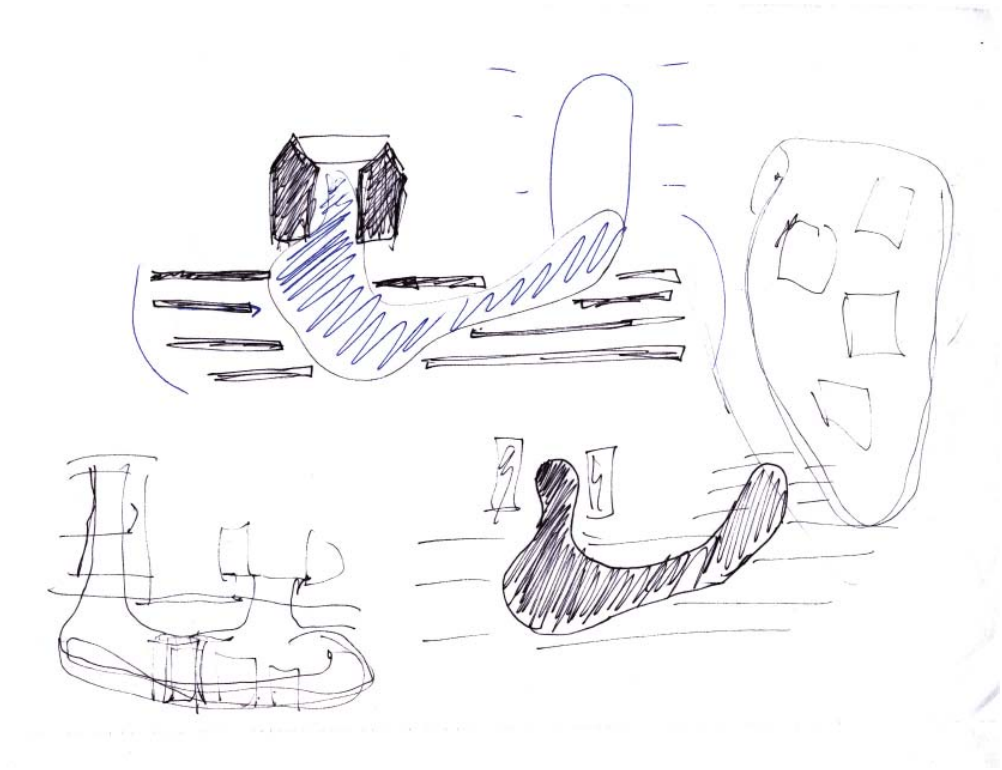
Instead a focus was put on a more 3-dimensional shaping of the space.
The idea was to use the shape as the carying elements of the ring buiding and the rest of the structure. The idea was to let the forces follow the shape and absorbing forces from more than direction.

The idea was to use the shape as a meeting point of the pedestrians and the metro, as illustrated in the “heart” drawing.

The thought was to create a single space that would reach out for the various fix points in the project: The Atrium, the metrostations, the s-train and the possible multistorey building on the Basar Site. This shape would be defined by the floor decks in the first thoughts. But rather than helping the creativity this limited the 3D elements of the project.

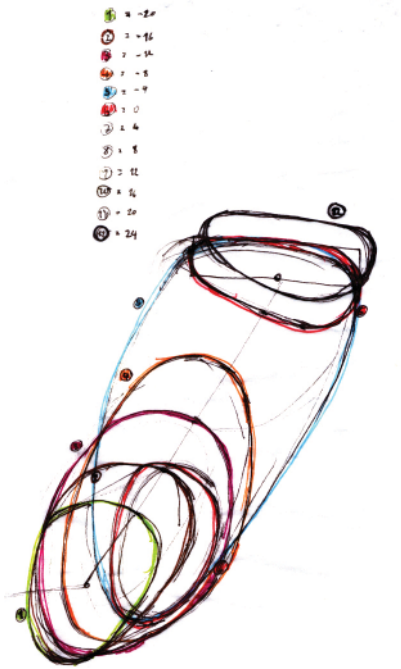
Rather than trying to define the space by the decks it was easier to approach the space by shaping the space as a negative shape.

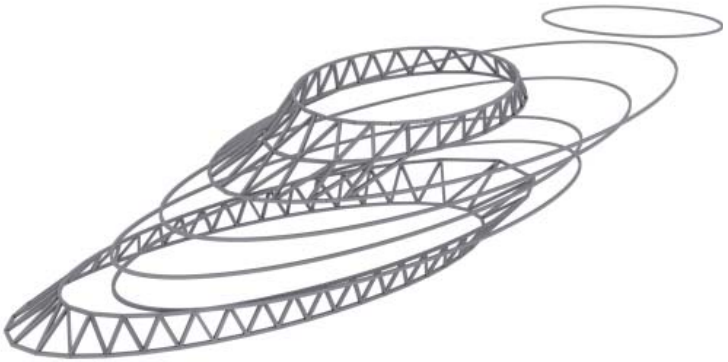


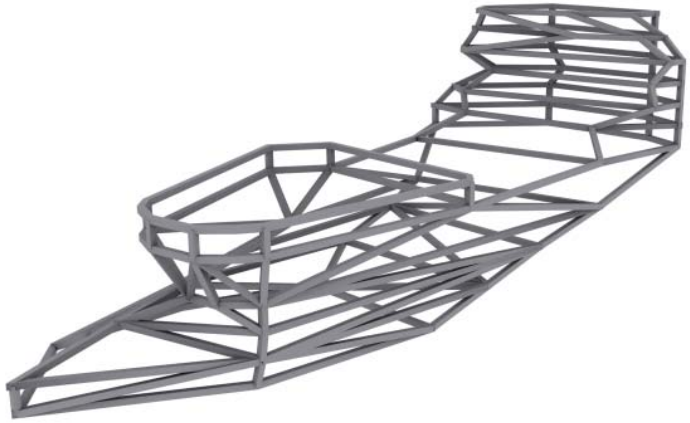


From the investigations of the 3D shape a new approach was reach where the decks was defined by the shape.
But to emphasise the shape and the usefulness of the structure a column beam system of triangular shapes was added to stabilise the “rings” of the building.

The first ideas was to create an organic shape created by the triangular structure. Because there was a requirement of having horisontal lines in the structure that would be integrated in the design the organic shapes proved to get large spans and odd angles that wouldnt suit the project. It also turned out to be hard to fit the organic shape to the existing building.
A more geometric approach was used as shown below.





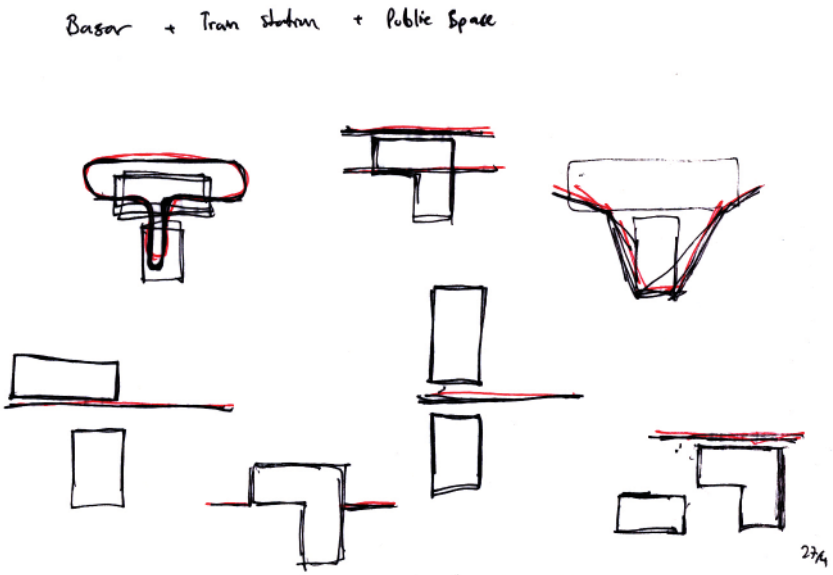


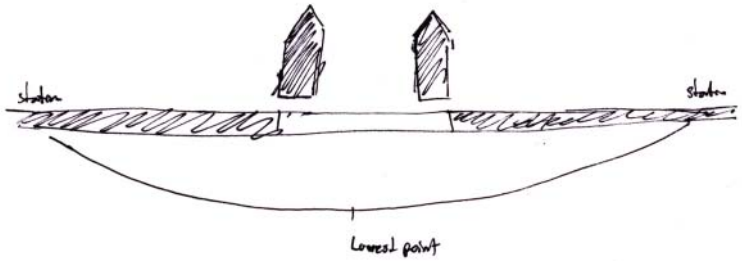
sketching
levels

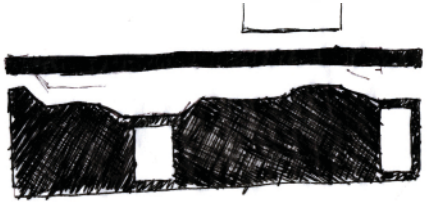
From the start the issue of levels was a bit ambigious. As mention in the initial processing phase a decision was made concerning the depth of the stations.
To ease the process a 4 m height was set for the floor heights, from floor slab to floor slab.

The real issue was how deep the concourse level was situated and how the levels should be controlled.
The first drawing shows the levels through the red lines with the boxes representing stations and the above function. The issue is how the levels will connection with street level and the stations depth.
These small drawings is an example of the thoughts behind the levels. What they have in common is one strong levelled connection which was also the idea in the early stages where the entire underground structure was levelled.

With development it was thought that the levels should variate to create a more interesting space. Early on the below drawings appeared with no real thought other than as a potential concept.



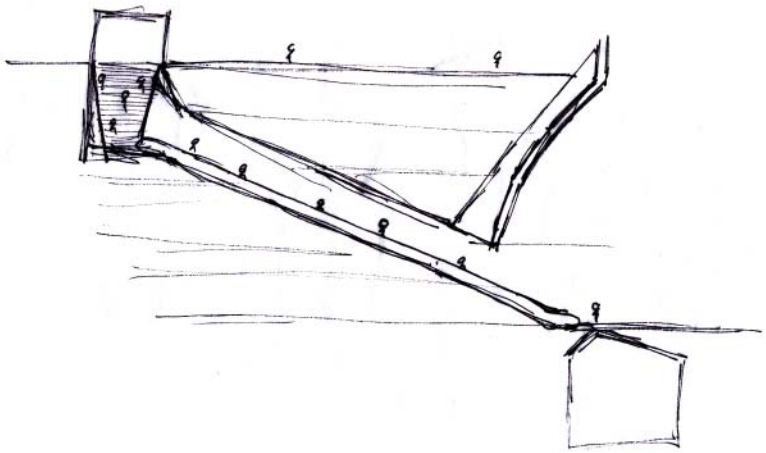


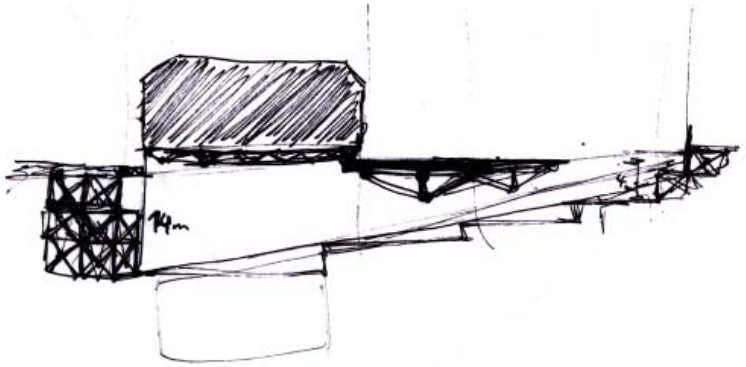


As the project developed into a singular shape it was decided that this shape should be part of or influenced by the levels.

The below drawing shows the possible connection between the s-train and the atrium. This was to show the way the atrium would connect to the outside.

The last drawing shows the basic thought for how to deal with the level difference between the two stations. As such this was one of the first suggestions that included the sloping landscape leading down to the atrium.



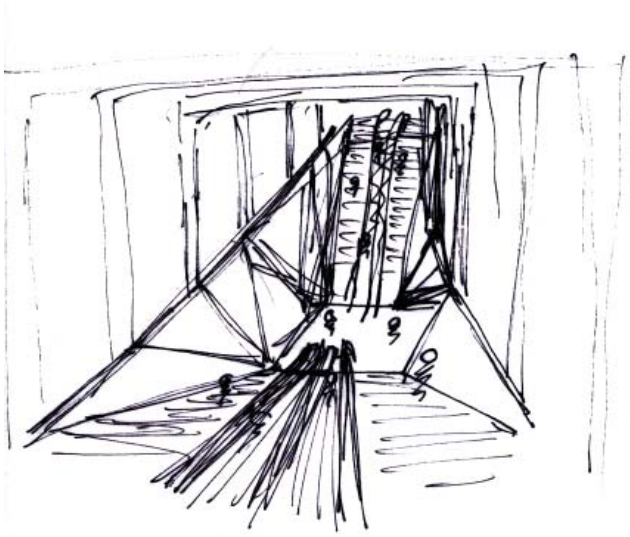


sketching

underground landscape

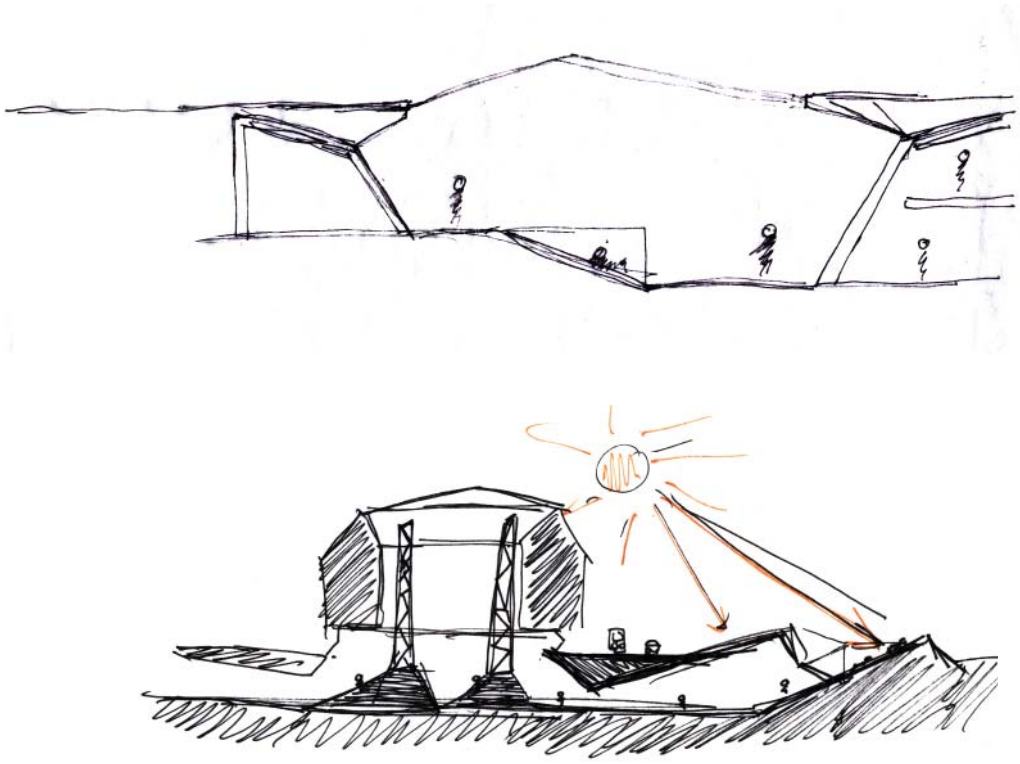
The levels variation was meant to develop into a underground landscape. Both for spatial experience and for functions.

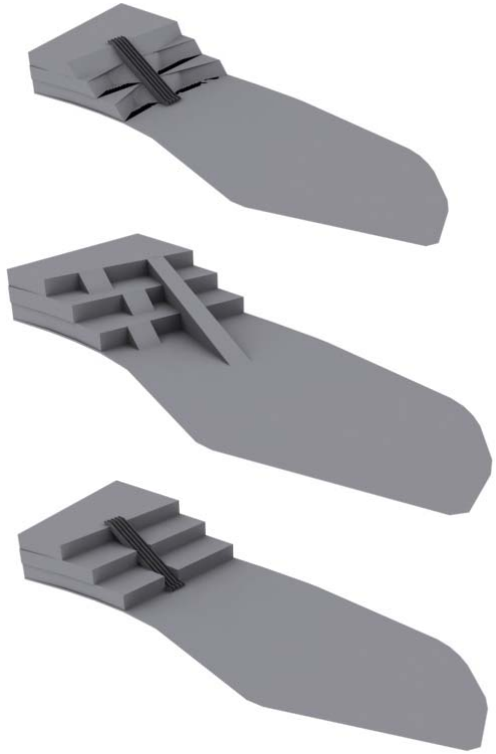
The development was also about creating “unusable spaces” that had functions. For people to sit or exhibtitions to take place. To create a sense of space.



The below drawing shows an idea for the landscape to reach above ground and become an area for people to sit in the open facing south towards the sun.

The three renders on the side are quick ideas of how to deal with the levels with stairs and moving walkways integrated in the landscape.





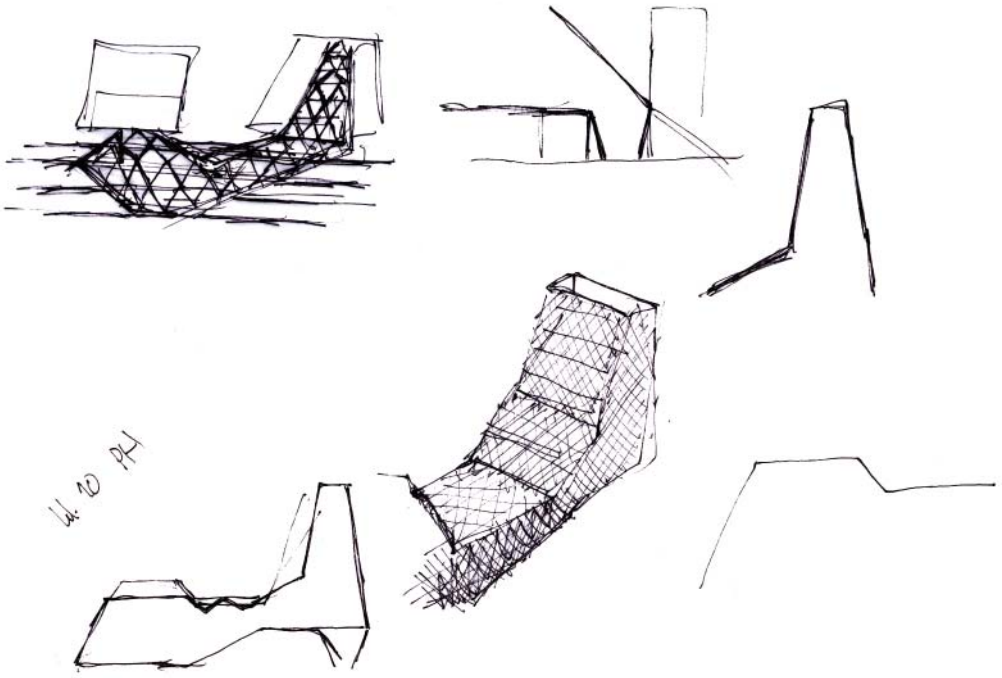
sketching

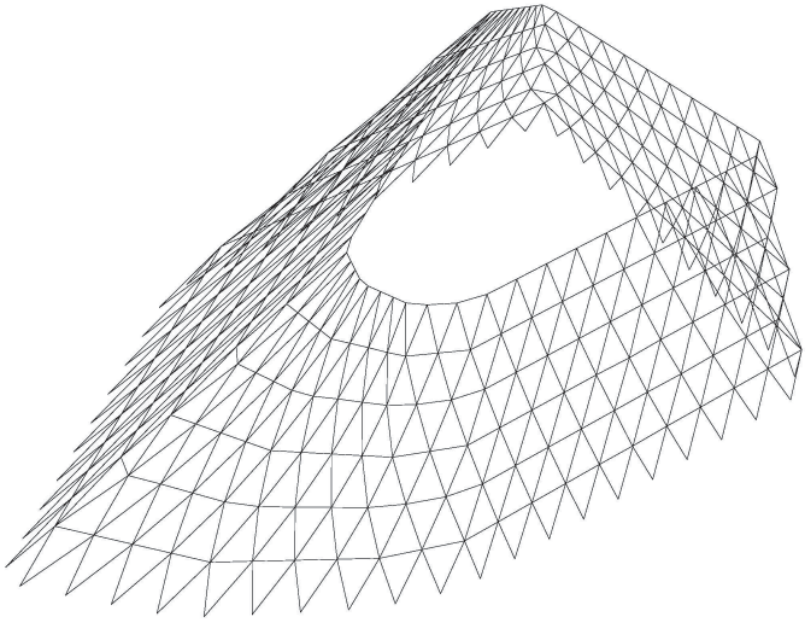
shaping

The development from the organic shapes led to a more rough and geometric shape. The idea was to base the structure on the existing building and adapt it to the stations. This way the force was to be led directly down the structure.

The principle and explaination follows in *Principles.*

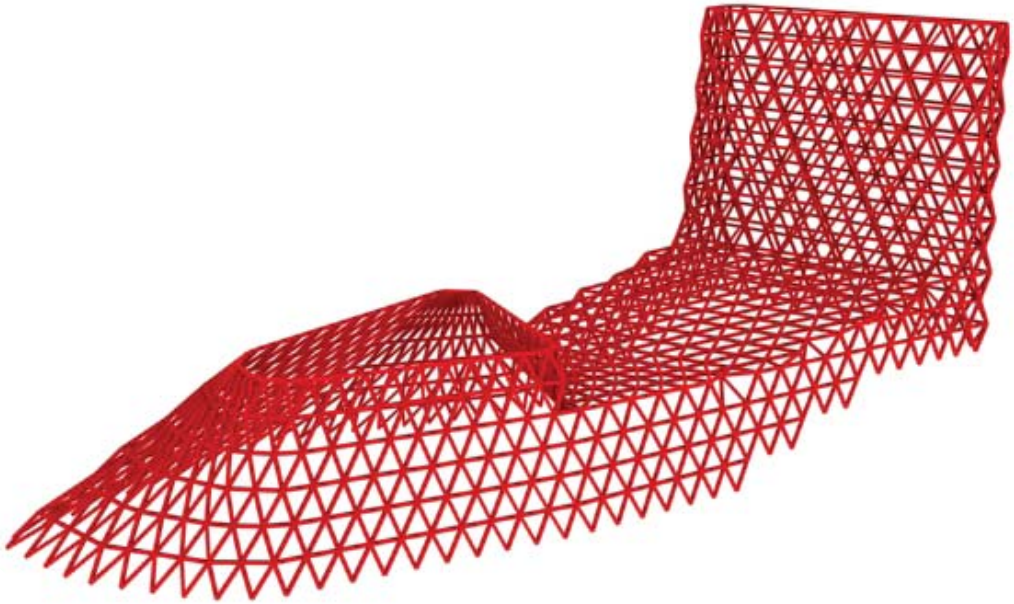
The below illustration is of the main atrium showing the shaped based on the forces.

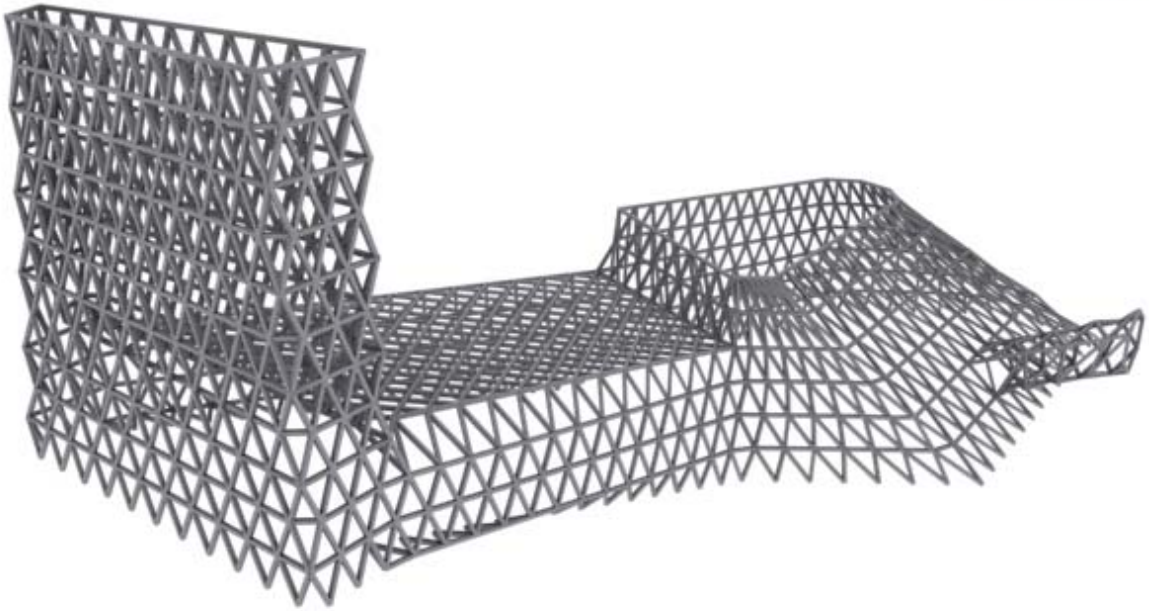




The entire shape of the structure was developed into the below iterations. The red structure was the first fully developed structure done relatively fast. This is also the structure on which the Staad.PRO results is from.

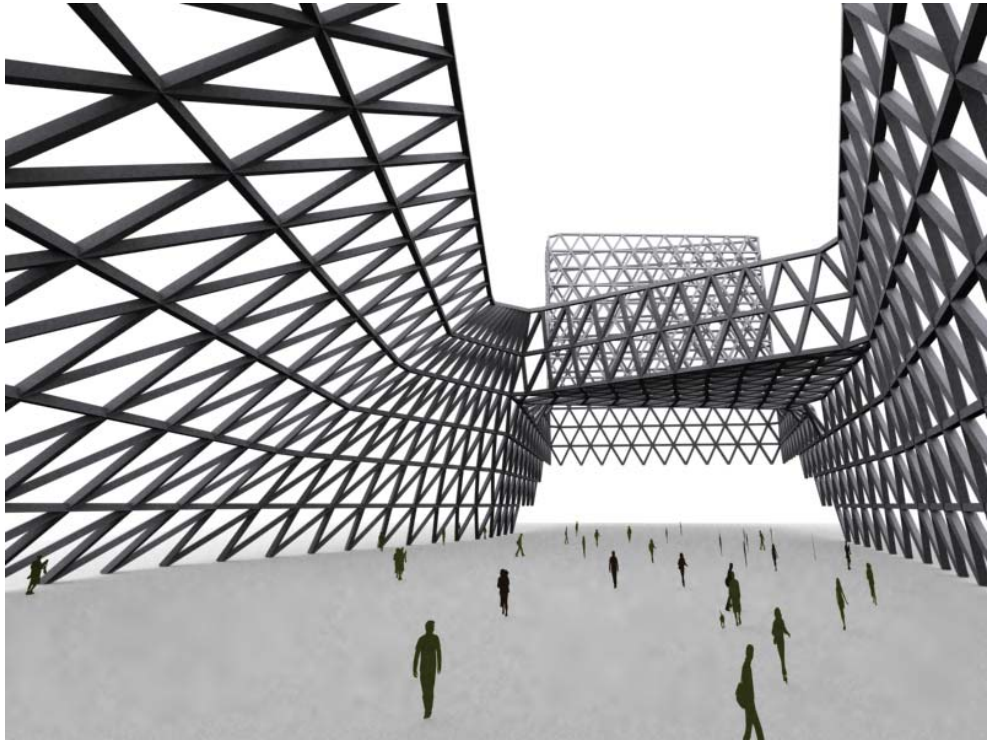
The structures is virtually identical. A small addition is based on the need for access to the s-train and further more adaptions was made to improve connection between the outside and inside.





sketching

atrium



sketching

focus areas

inspiration

for the finale sketching

nørrebro station

process

bo laugesen
ad10-ark15