Restoration of ‘Campus South’
dealing with ‘Campus South’ as a scenery

A3 Booklet Graduation Design
Sophie Luyckx 4395948

Graduation Studio ‘Revitalising Heritage’
Hembrug Peninsula
Campus South
Campus South will be revitalised in which the new program of cultural initiatives and entertainment strengthen the character of the ensemble, making the area accessible and a place to be for the public. The ensemble will be a public gathering place, where people can enjoy their time while relieving stress. This will be created by designing a program of creative initiatives and entertainment, which will exist out of: a beer garden with terrace bar, a film studio, and an information point to welcome everyone to the Hembrug terrain.

The key is to find a balance between where to preserve, where to restore and what to renew, therefore a restoration plan is created. The main strategy is to preserve as much as possible and to demolish only parts of low value when necessary. Additions can be made, but must be demountable for the future. Thereby will the existing inspire the new interventions.

Sophie Luyckx
Proposed transformation strategy Hembrug terrein - Het Twiske:

- Existing bicycle routes
- Main traffic structure
- Slow traffic structure
- Connect existing places with the network
- Recreation and sports area

Proposed transformation strategy ZaanIJ: Activation and connection of public places.

- Reserve for a temporary program
- Publicly accessible waterfront with hospitality, business, and a few living-working blocks
- Noorder IJ-plas: Scenariostudy
- Recreational area
- Private areas on the waterfront
- Connections
- Activation and programming places on the IJ
- Connect existing places with the network

Source: Economisch-ruimtelijke verkenning Noordelijke ZaanIJ-oevers

Extension metro-/HOV-network
- Ferry connection
- Railway network
There are different types of structures on the ensemble. The expedition building, washing hall and bicycle shed exist out of a column and beam system. The heat treatment building exists out of a box system in which the walls are load bearing. We assume that the bicycle shed had a similar steel construction as the expedition building, based on the remaining corroded steel columns in the wall. The heat treatment building has a load bearing brick structure and the washing hall has a wooden structure.

Source: Luyckx, S.L. & Boujamaa, S. & Lengton, M.M.
The washing hall was used by 192 men at the same time and had 738 locker cabinets. The employees entered the building through eight entrances, which had two doors per entrance. The building exists of a grid of washing basins and cabinets. The lockers enclosed the wooden structure and were positioned alongside the walls, to serve as many people. The employees were not allowed to take their working clothes home, so they started and ended the day at the washing hall.

In 2009, the building was found with a broken and collapsed roof, taken over by nature. The roof is renovated as well as some elements of the structure.
Campus South consists of three whole buildings and the remains of one building. The heat treatment building, expedition building and the former bicycle shed used to have a pointed roof. The heat treatment building, however, has brickwork walls supporting the roof structure. The washing hall has a gambrel roof which makes the building look like a farm building. The wooden structure enhances this even more. The expedition building and the bicycle shed have a steel structure. The bicycle shed and expedition building both have a small but long volume whereas the heat treatment building is clearly divided into three blocks of which one has the volume of a cube and the other two have a rectangular volume. The washing hall has a different volume which derives from the low walls and the gambrel shaped roof.

Typologies

Pleasant and welcoming character

How did Campus South contribute to the functioning of the weapon factory?

Pleasant (adjective) : enjoyable, attractive, friendly, or easy to like.
- Cambridge Dictionary

Source: Luyckx, S.L. & Lengton, M.M.

The Campus (weapon factory area) of Hembrug is divided into Campus North and Campus South. When comparing these two parts of the Campus; Campus North has larger buildings than Campus South. Campus South is, when looking at the human scale, more in proportion. The large buildings at Campus North are placed on large plots and some of the grass/open fields are as large as these plots. The open areas at Campus South are smaller but are in proportion with the buildings as well. The exception, in terms of proportion with human scale, is the heat treatment building which is quite high. This was needed for the large ovens and machines which stood in this building.

Source: Lengton, M.M.

02 - DIMENSIONS

Pleasant and welcoming character

Source: Boujamaa, S.

Pleasant and welcoming character
The essence of the bicycle shed is expressed by the concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete foundation. These are of historical value, as they show a part of the building that was once a concrete founda...
“The sound of the birds will be completed by the sound of people”

“How did the pleasant and welcoming character of Campus South came into existence, and how can this character together with cultural initiatives contribute to creating a public gathering place?”

How far do you want to go with maintaining the existing situation, with restoration (repair) and what do you renew, when simultaneously preserving the characteristic atmosphere and creating a well-designed environment for the new use?
Demolished
"How far do you want to go with maintaining the existing situation, with restoration (repair) and what do you renew?"

Preservation - Preserve as much as possible - the past is central - demolish only parts when necessary
Restoration - Appreciation of the existing - cleaning and repair
Renovation - groundwork for future transformations
Interventions - The added interventions must be removable - the existing will inspire the new
Redesign - Strengthens the ensemble

Heritage Position
Campus South

Information point (film) Studio Beer garden Terrace bar Pergola Archway

preservation restoration renovation intervention redesign
reduce reuse recycle

sustainability, circularity, durability, demountable
Circularity

- materials
- resources
- demountable additions

**District Heating**
- solar glass
- green roof
- mechanical ventilation
- floor heating and cooling
- insulated roof
- rainwater collection

**Solar glass**

**Solar panels**

**Hydrogen** pilot
- mechanical ventilation
- floor heating and cooling
- insulated roof and floor
- rainwater collection

**Secondary window frames** will be applied

**Use of wood with reforestation mark - FSC: forest stewardship council**
Endless waves of transformation

function

central = past ‘painting’
Moisture damage

Legend

Suzanne Fischer
Floor visser + own image
Restoration plan

Beer garden

Film Studio

- **Preserve**
- **Restore (repair)**
- **Room for renewal**
East Facade
1:100

Current

New
The heat treatment building is divided into three compartments. Each compartment has a steel roof structure beared by brick walls. The first part of the heat treatment building has a different kind of roof structure. It transfers the vertical forces of the roof onto the brick walls as well as horizontal forces generated by tractive forces. The other two roof structures transfer only the vertical forces of the roof onto the walls. The walls are supported by buttresses which are placed on the inside. These buttresses help to bear the load of the wind of the facades. In the oldest part of the building it seems as if they were added later on as the buttresses are not visible in the floorplan of 1954. This might be done to strengthen the wall as it was affected by the wind. Due to the buttresses and the brick walls there is only one wind brace, located in the newest part of the building.

Two interesting structural aspects are the walls between the higher part and the other compartments. The wall between the oldest part and the higher part is used to raise the facade. When you look at the structure, you can still distinguish the old wall from the raised part. The other interesting wall, which connects the higher part to the newest part, is cut off on the bottom and supported by a steel beam and column. It is likely that there was an opening in the wall, but never this size, so the wall is intentionally modified. We assume this is created with the expansion of the third part of the building.

Source: Lengton, M.M.
Roof
1:100

Slope
First part | south-east | 1917

Second part | south-west | 1924

Third part | north | 1930

Interventions | 2020
Afbeelding 5: Kunstinstallatie door Krijn de Koning en Dominique Pellety voor de Artcite tentoonstelling in Windsor, Canada in 1994, geciteerd uit http://www.krijndeijing.nl/overview/34.html

Afbeelding 6: Eeuwenoud uitgesleten pad, geciteerd uit http://www.pelgrim-helmut.nl/Pages/Main/html/Camino_Fisterra/290612.html

‘Nudging’
Existing foundation
Monolith finished concrete floor
Floorheating - dry system (11 mm insulation + noppenlaag)
Reinforced concrete floor
Polystyrene insulation
Existing tiles
Stucco
Brick
Insulated cavity - EPS Pearls
Brick
Detail B
1:5

Stucco
Brick
Insulated cavity - EPS Pearls
Brick

Oak floor finish
Fermaell noppenplaat with floor heating
Underlayment
Wooden slats
Oak ceiling

Spotlight

HE140A
Glass roof - triple glazing with steel window frame

Zinc gutter

Steel cover plate

Foamglass insulation

Stucco
Brick
Insulated cavity - EPS Pearls
Brick

1:5
Detail E
1:2

Existing steel window frame
Single glazing

Putty

MetaPlus Comfort secondary frame

Existing steel window frame
Single glazing

36

650

62
Detail F
1:5

- Glass roof - triple glazing with steel window frame
- Zinc gutter
- Wooden purlin
- Steel profile
- Truss
- IPE 180

Materials:
- Sempergreen Sedummixmat 30 mm
- Substrate 40 mm
- Drainage including filter fleece 25 mm
- Insulation - sandwichpanel 100 mm

Stucco
Brick
Cavity
Brick
Stucco
Demountable Brakel wall system
North Facade
1:100

Current

New
West Facade
1:100

Current

New
Ventilation supply in the floor
1:200

- Ventilation supply
- Ventilation exhaust
- Floor heating/cooling

Legend:
- Ventilation supply
- Ventilation exhaust
- Floor heating/cooling
- Heat recovery
- Water pipes

Boiler (hydrogen)
Monolith finished concrete floor
Floorheating - dry system (11 mm insulation + noppenlaag)
Reinforced concrete floor
Polystyrene insulation

Floor grate
Ventilation channel

Existing foundation
Existing roof timber
Insulation
Roof covering

Gutter

Extension buoy board

Wooden structure
Stucco
Brick

20
100

220

80
Existing roof timber
Insulation
Roof covering

Deepend gutter

Existing roof frame
Existing wire glass

Laminated insulation glass (hangs under existing steel profile)

Steel corner profile
‘Randhout’
Purlin

Window frame