THE COMMON GROUNDS OF RADIO KOOTWIJK

INTRODUCTION

Radio station Radio Kootwijk was once the centre of our country's technical development and was even considered the centre of the world. In the village, a column with a globe topped by a large ear on the spot where Radio Kootwijk is located symbolises this. With the loss of all function of the transmitter park, the importance of preservation has been lost. This once important entry of Dutch communications development is the designated site for renewal.

With the disappearance of the village's transmitting function, many buildings have lost their function. The village's transmitting function was the reason for its existence. Although several attempts have been made to redevelop the village without success. In 2020, the state council permanently revoked the nature permit for the plans that existed there. This means that Radio Kootwijk is now faced with the challenge of developing meaningful developments at Radio Kootwijk. Should nature in this demarkable forest be allowed to develop freely?
Designers' means improvement and in this case the only way to keep a new purpose to remain heedy. Repurposing means giving an existing buildings a new/different function. That way it does not end up empty and it is not demolished. It gets a second life.
Repurposing is a sustainable way of dealing with buildings. In the past, for years, people have been trying to redevelop the old transmission park without success.

With the loss of the broadcasting function of the radio station, the village has changed, employment decreased and many buildings belonging to the radio station are suffering from vacancy and decay. With the loss of the connecting factor in the village, there is no unity anymore. This can be drawn from the demographical functions, which are now the dominating context. The buildings belonging to the transmitting complex appear as islands in the landscape. Without the connecting factor of the transmitting function, the complex used to be a visible unity marked by the imposing buildings and transmitter masts. This lack of unity was created by the loss of communication and can also be restored by communication.

THESIS

The cultural history of communication in the Netherlands has a distinguished past and a rapidly developing future. Due to ongoing developments in our communications, the consideration and visibility of communications is rapidly reduced. The Dutch communications landscape has many highlights, including the village and radio station of the same name, Radio Kootwijk. This village was home to the Dutch radio station, which was responsible for communication with overseas transport and colonies in the 1920's, has great symbolic, architectural and historical value.

Since the radio station fell out of use due to technical innovation, the location has lost its function and is a subject of debate between its ecological and cultural historical importance.
Radio Kootwijk is an intriguing location with a lot of character, which has not lost its visibility unlike communications. Radio Kootwijk its survival is uncertain but with its past it is a perfect domain to make culture and nature co-exist. Doing so Radio Kootwijk will become future-proof and regain its former status as cultural hotspot of the Netherlands.

RADIO KOOTWIJK - TRANSMITTER COMPLEX + VILLAGE 1920S

HYPOTHESIS

NATURE AND COMMUNICATION CULTURE ARE COMPLEMENTARY. ONE ENHANCING THE OTHER. THE FORMER BROADCASTING COMPLEX IS BROUGHT BACK TOGETHER FORMING AN ENTITY THAT MAKES THE JOURNEY OF RADIO KOOTWIJK ITS HISTORY AND FUTURE VISIBLE IN ONE IMMERSIVE EXPERIENCE.

DEBATE

Radio Kootwijk, the site of my project is not only a symbol of technical development in the field of communication, but also a piece of cherished Dutch nature. In 2020, the Raad Nieuwe Land of Gelderland decided not to granter permitter because of its high altitude and therefore visual interference of radio traffic. At the time, little to no consideration was given to the impact on nature, but today the area around Radio Kootwijk is a Natura 2000 area protected by the national government.
There are thus supporters and opponents of the development of the area, in this a deadlock has been reached that needs to be broken in the interest of the cultural and historical se-ness of the site. Stichting Behoud Heiloo Wetenschap Bellefonte (SHWB) as opponent and Staatsbosbeheer as supporter of the development plays a major role in this.

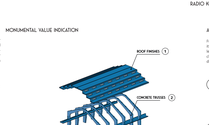
COMMUNICATION

For billions of years people have communicated through signals, and written script. Our forms of communication are embedded in our cultural and unconsciously influenced by time and environment. To understand each other, we need to understand our methods of communication. Our communication methods are ever-changing and constantly evolving. Our younger generation may not understand younger generation due to the differences in communication we have been taught or developed.

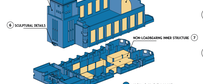
There is a lot of resistance in the world, people do not understand each other and their motives. Communication is key in this, the developments of communication over the years unconsciously creates a gap. The gap between generations who do and do not use new/different media as means of communication. Are things moving too fast for some people or do we not move fast enough? Is the gap between people who do and do not use new/different media. By getting to know each other's forms of communication and investing in understanding, we become aware of the issues and more tolerable.

TIMELINE
A DETAILED HISTORY OF FORMS OF COMMUNICATION

MONUMENTAL VALUE INDICATION



PROBABILITY ANALYSIS



ANALYSIS OF BUILDING A, WITH REGARD TO BUILDING DEMOLITION AND DAYLIGHT ENTRANCE

DAYLIGHT ENTRY

For a public function, the entry of sufficient daylight is extremely important. Radio Kootwijk's iconic Building A is oriented from west to east, with its front façade facing west. This means that in the former transmitter hall, daylight access during the day will be greatest on the left (south) side of the building. This offers opportunities for exhibition and reception areas, while the remaining, less illuminated spaces could serve as storage. The contrast between the concrete portals is enchanting and eminently suitable for exhibition and reception.

THE HISTORY OF THE LANDSCAPE

IMAGE 1 MOWING FORMED LINES, AROUND 1930'S

Large parts of the Veluwe consist of moraines from the Saale Ice Age. These height differences and plains were created by advancing ice from the north that pushed the ground ahead of it by the weight of the ice.

IMAGE 2 FIREWALL FORESTS UP TO 1000 BC

The area where Radio Kootwijk is now located (indeed like a primeval forest, these are so-called pre-human forests without any human influences.
We don't have forests like this in the Netherlands anymore.

IMAGE 3 HEATHER MOORLAND 1000 BC - 5TH CENTURY

Due to the demand for building materials and firewood, large parts of the forests were cleared, creating a lush moorland landscape between the woodlands.

IMAGE 4 SAND DRIFTS 5TH CENTURY - 19B

Gradually the heather moorland was used for more agricultural activities. Herds of sheep were grazing on the planes, the sandy soil gradually lost its cohesion. Eventually the landscape transformed into a sand drift.

IMAGE 5 FUNCTIONING BROADCASTING STATION 19B - 1974

During the high days of the broadcast station, the environment was an interesting emulsion of advanced technology and the lush green landscape.

IMAGE 6 PRESENT DAY 2022

Today's landscape and village is a pale shadow of what it was like in its height days. Vegetation has overgrown the landscape, the buildings are in a state of decay. This makes the whole thing less telling compared to what it used to be. Due to the distances between the structures and the vast surroundings, the complex seems to float in the landscape.

IMAGE 7 POSSIBLE FUTURE IMPRESSION

As has become clear from developments and the history of this well-known part of the Netherlands, everything we do and see is only temporary. What is going to result from my design will be so too. It is important to me that the site gets the potential to develop into a place where nature and culture/communication can coexist/exist. Even if once was. All this without making permanent changes to the monumental structures and nature. The fragmented landscape will regain cohesion through the domain that my design will demarcate.

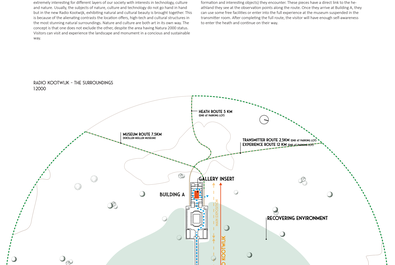
THE DESIGN

Radio Kootwijk is an experience due to the variety of nature and cultural hotspots around the former broadcasting station. The concept is interesting for multiple target groups. Lovers of culture nature and technology come together at this location, creating a high degree of cross-pollination. The various aspects make it profitable due to the large influx of public.

This public must be managed as the area is home to numerous special plant and bird species that use the heath to breed and live off the special soil composition that this heathland has. Visitors are encouraged to walk, bike or take the bus to the location, limiting car accessibility itself. Only the already used land can be used in this case. This means that heathlands remains the main entrance route but is modified in a way that visitors can no longer cause damage and nature can recover around the former transmitting station.

The route to the broadcast station will be a unique experience where visitors get even closer to the landscape than ever since. Visitors will be warmed up to all the themes to be experienced (communication, culture, nature). When the visitors reach Building A they are able to remnisce about the past and experience the future. The roof of Building A is accessible and provides overlooking the undisturbed heathland to conclude their journey. The former transmitter room of Building A will become a visitor experience with changing functions where the exhibition room becomes the crown jewel of Radio Kootwijk.

Radio Kootwijk lies in the middle of one of the most important protected nature reserves in the Netherlands. Because of this, the area is home to many special plant and bird species and many valuable and endangered flora and fauna have been up residence. This makes the area extremely interesting for different layers of our society with interests in technology, culture and nature. Usually, the subjects of nature, culture and technology do not go hand in hand, but in the new Radio Kootwijk, exhibiting natural and cultural beauty is brought together. This ensures that the visitors experience the area in a new way. Nature is no longer hidden but in the most stunning natural surroundings. Nature and culture are both art in its own way. The concept is that one does not exclude the other, despite the area having Nature 2000 status. Visitors can visit and experience the landscape and monument in a conscious and sustainable way.



PROGRAM AND SCENARIO

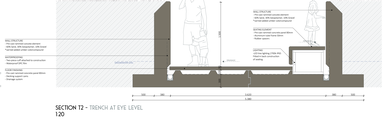
Approx. 200 parking spaces for visitors/per car.
Elevated between, hatch/hatched underneath (museum and sport site)
Parking spaces 2.5 x 5 meters, 6 meters driving lane.
Disabling spaces 2.5 x average car surrounding area + **50 disabled spots minimum**

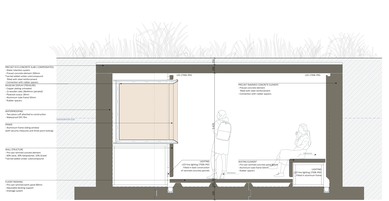
THE ENVIRONMENT - SHIFTING SAND MOORS WITH SHRUB HEATHER

Shrub heaths comprise vegetation with dwarf shrubs on dry sandy soils in inland shifting sands. These shifting sands were formed by re-suspension of top soil, especially after the late Middle Ages. Prior to this, the sandy soil was covered by vegetation. Because of this, the so-called dune lowlands and flat lowlands, literally are or no podzolic profiles have developed yet and the soil has not yet or only superficially been de-mined. Shrub heath (Calluna vulgaris) usually predominates in the shifting sand heaths. Other dwarf shrubs can also play a role here, such as bilberry (Vaccinium myrtillus) and cowberry (Vaccinium vitis-idaea). Even a few common heath (Erica tetralix) dominates over shrub heath may fall under this habitat type.
Vegetation dominated by grasses (wavy hair-grass and c.m.m.) (Deschampsia flexuosa) and sheep's fescue (Festuca ovina) is also a possible variant. Although it is more humid microclimate, a mossy heathland form may occur, while on expansive slopes, on the contrary, a lichen-rich variant may occur.

THE ENVIRONMENT - BARE BIRD SPECIES

The shifting sand moors with shrub heather area around Kootwijk belongs to the habitat of numerous bird species. Some of these birds are: Tree pipit (Anthus trivialis), Red-backed shrike (ACZ1), Skylark (ACM65), Tawny Pipit (ACV55), Stonechat (ACT6), Whinchat (ACT7) and Red-backed Shrike (ACB8) Shrike (ACB8).
The birds live in the open, sandy, dry, acidic and calcareous soils of the heathland. Some of these bird species are but two of small residents on this heather area to rest. As for the birds and small rodents, this heathland is an indispensable part of their ecosystem. It is therefore important to maintain it and even improve its quality.

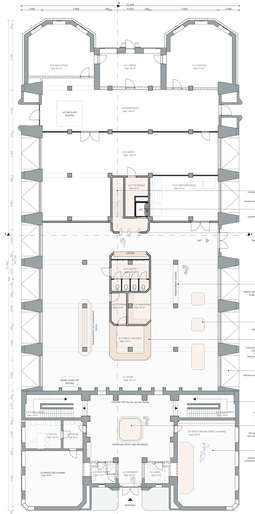




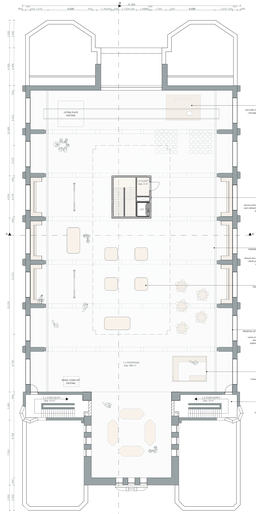
VISUAL - SUBTERRANEAN PASSAGE UNDERNEATH HEATHLAND

VISUAL - SCENIC SECTION WHERE THE VISITOR IS AT EYE LEVEL WITH THE ENVIRONMENT

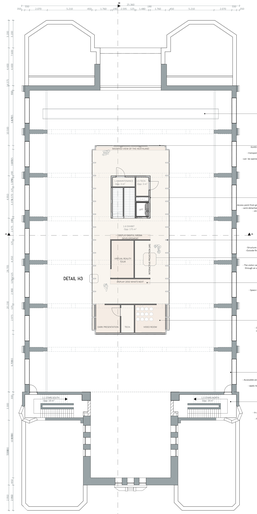
FINAL DESIGN



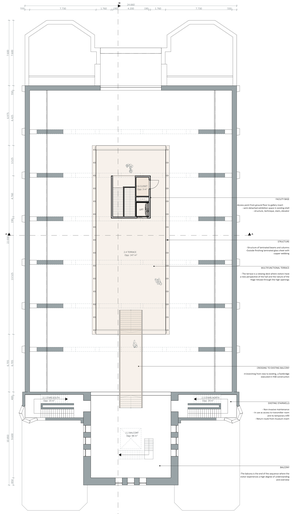
GROUNDFLOOR - ENTRANCE
1:100



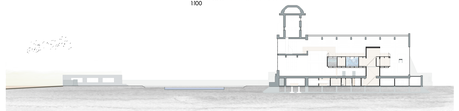
FIRST FLOOR - FORMER TRANSMITTER HALL
1:100



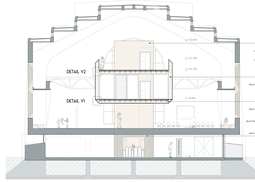
SECOND FLOOR - GALLERY INSERT
1:100



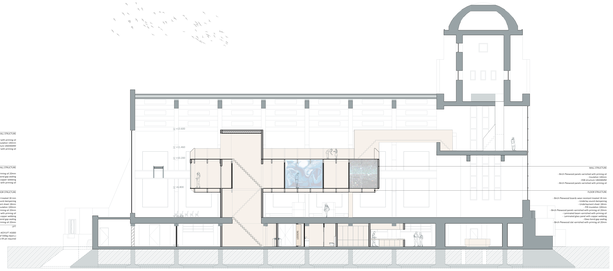
THIRD FLOOR - VIEWING DECK AND BALCONY
1:100



SECTION T-T - TRENCH
1:300



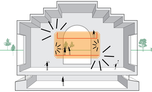
SECTION A-A 1:100



SECTION B-B 1:100

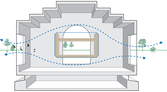
AN EMPTY SHELL

Building A, the former main building of the broadcasting operation at Radio Kootwijk has been empty for years. The building has qualities such as its beautiful surroundings, its light and its character and size. These are also its disadvantages, the surroundings are inhibitable and difficult to access and the building exceeds the size for many possible functions at this location.



A NEW JEWEL

To make the site viable again, there is great demand for a new function that can be at the heart of the former communication site between the Netherlands and the Dutch East Indies.

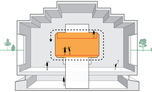


OPEN UP THE TRANSMITTER HALL

Building A has had a large footprint in the mogo telawe since the complex was built in the 1920s. Over the years, this footprint has changed several times but now it is time to reduce it even further. Opening up the transmitter hall creates a common ground within the building for people and the environment.

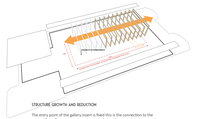
HISTORICAL USE

In its high days, the former transmitter hall was full of machinery to keep in contact with the Dutch colonies, together with the network of masts in the surrounding heathland, this was the basis for the long distance transmission. To increase the range of the long wave transmitters, large coils that generated an electromagnetic field were used, these were prominently displayed in the transmitter hall.



ORIGIN OF MATERIALISATION

In the design, the materialisation provides an extra layer, the materials used all have a degree of optical layering traced back to the structure of the historic electromagnetic coils that were previously installed in the transmitter room. The laminated trusses that repeat a circular movement and the accentuated lines of the Pinewood sheet material are the main examples of this reference to the former use.



STRUCTURE GROWTH AND REDUCTION

The entry point of the gallery insert is fixed this is the connection to the ground floor. The structure is composed of glued laminated timber portal frames. These trusses are evenly spaced in a grid which makes the structure reversible and thus allows the gallery to grow or shrink on demand.

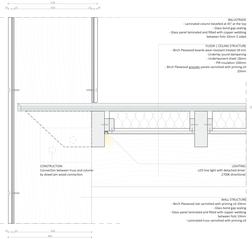
BIRCH PLEYWOOD
(SHARP INSIGHT)

COPPER WIRE GLASS
(SHARP INSIGHT)

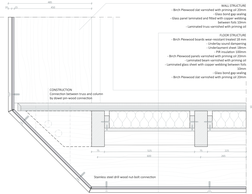
VISUAL - THE TRANSMITTER ROOM WHERE TEMPORARY FUNCTIONS TAKE UP RESIDENCE WHERE THE EXHIBITION INSERT IS THE LARGEST ART PIECE.

VISUAL - INSIDE THE EXHIBITION INSERT WHERE ALL LAYERS COME TOGETHER

DETAIL H3 1:5



DETAIL V2 1:5



DETAIL V1 1:5

MARLIN VAN ROZENDAAL MSc2 EXAM 25 .06 .2020