46 DESIGNING AN OFFICE

46.1 INTRODUCTION

This is the report of a design process of Jan Brouwer. The report describes the design for the Water Board Rijnland in the city of Leiden. Each illustration indicates an important step in the design process.

My design process starts with reading the programme of requirements. I am just making notes, no little sketches. Next, there's a half-day visit to the location. Then I determine at quite an early stage the smallest modular unit of the building, in this case the size of an office unit. This happens schematically; without knowing the context well. With this knowledge I make the first little sketch.

In the present case the programme proved to be simple. A clear tri-partition of the Water Board came to the fore: Directorate, Departments and Services. It entailed an office space accommodating 350 employees and further functions such as a large formal and representative conference space, an archive with maps, an office restaurant, a small laboratory for the restoration of historically important maps, a library, a printing shop and an office for mail.

Important points of departure for the design included:

- Adjusting the design to the location
- The metaphor of the Gate to Leiden. The Water Board is an important governmental insti-_ tute that should occupy an important place. The building lot is positioned on a characteristic spot on the main road into the city. Through this, the idea of a Gate emerged.
- Sustainability seen from material and method, looking for different sources of energy than the usual ones.
- A climate façade.

46.2 DESIGN PROCESS



421 Concept

This drawing shows the first idea occurring to me after reading the programme of requirements. The building is partitioned into three parts: the Directorate along the road, the office rooms in the middle and services in the third part.



422 Avenue

The Urban Office of the city of Leiden wanted to straighten a curved road into a straight avenue. I proposed a different urban plan preserving the curve.

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46.1 Introduction 46.2 Design process 46.3 Looking back

423 423 427





424 Form

423 Curved Avenue

The illustrations show the motor-road to the new building from two sides. The curve is creating a certain tension. Loss of the curve would entail in my opinion an impoverishment. And what is more: by making a straight avenue there would not be sufficient space left for the building itself on the lot. (Zoning constrictions as to height also applied.)





425 Option for extension

One of the requirements put to the building prescribed that extending it would be a possibility. By applying a form in steps parts may be added to the building without causing a significant visual change.



426 Structural lay-out

At an early stage the alignment and size of the structural layout were already determined. For the direction the east – west parallel to the road was chosen and the size was derived from the sizing of a 'standard' office module.



427 Study: office wings curved, circular conference room, central staircase.





428 Same study; but staircase and CC room (Combined Conference, the 'parliament' of the Water Board) shifted.

429 Study office wing south.

It became clear in each study sketch that the walks within the building would end up being too long. That necessitated a change of concept: from the tri-partition of the building to a separation in two for the offices. This would also fit well in the structure of the institute, since there are two large departments, one for financial and administrative affairs and a technical department. These three sketches (figure 374-376) are representing the study of the form of both parts of the building and of their positioning vis-à-vis one another.

430 Several test models

The forms of the two parts were tested with the help of models. It was studied in which way this idea could be placed on the location. The two parts were called pencil and banana.

Bi-secting the organisation proved not to co-incide with the wishes of the departments, there was a wish to be able to extend if need be. Between banana and pencil, bridges proved to be needed.





431 Edges sharpened

Important lines-of-view are sharpened. The idea of the gate function is further developed and the positioning in the water became an important point of departure.

432 Cutting the banana

The form of the banana and the pencil still were changed. Since I considered the gate function to be very important, I did not change that anymore.

6 str.

433 Orientation banana – pencil in parallel



434 Determining module size carrying construction offices

The sizing of the module was already fixed in the beginning. I fixed the size of the room module on 1.80 m. The façade articulation would get the same size and the structural module size would become 7.20 m. (4×1.80)







435 Connecting banana & pencil

These are sketches of several solutions for connecting the banana and the pencil, while retaining the idea of a gate function to Leiden.





436 Design of the facade

The design of the façade is a story in its own right. Optimising the quantity of daylight into the office spaces was an important point of departure. That is the source of the idea of a lighting-window and a viewing-window. The lighting-window is a separate, high window seeing to it that extra light is penetrating deeply into the office room. This economises on the energy bill for artificial lighting.



437 Façade development

Usage of reflecting strips for optimising daylight



440 Floor plan, final design

- 439 Adjustment
- Urban adjustment of the building.



438 Detailing of the climate façade



442 Final result: the eastern wing after sunset

441 Boring

To the taste of the 'Dijkgraaf', chief executive of the Water Board, the façade was too boring. With some regret I added a small, protruding box to the façade. In utilising the building this exception has been negated.







46.3 LOOKING BACK

Acquisition of the commission

The project was a European contract. Some 30 - 35 architects competed. The demands were quite high. Ten architects qualified themselves. Five of them were excluded by balloting, while the remaining five had to describe of one sheet A3 how they would proceed and what their wages would be. Our sheet A3 doubted the need for a new building rather than presenting a new design. That must have drawn attention.

Vital constraint

Crucial was my personal sustainability doctrine, thus making this commission interesting.

Golden moment

Never. Designing is a perennial battle. However there were some decisive ideas; such as the strengthening of the tri-partition of the organisation and the banana-pencil concept.

Dead ends

There were many dead ends, on all parts, like in the façades and the positioning of the stairs. It is important to find the right trail. Sometimes you have to take a few steps back in order to get along later.

Additional requirements for the building

An additional requirement stemmed from myself. It was the choice of as many pre-fabricated components as possible, given their sustainability.

How long is the design indeterminate?

Already during the preliminary design I draw 1 : 5 principal details. There is very little that I leave indeterminate. From the very beginning I have the feeling that things must be produced in a proper way.

Working method

I do not work methodologically, I am sorry to say; for there are many good things to be said for Architectural Design Management.

Impact of budget

In this project the budget was not very influential. It became clear during contracting that a million guilders had to be saved. Following that, some elements had to be left out; like a pergola and sun-shades and less sophisticated types of material were used.

Meeting with the constructor

The builder was not used to the unconventional techniques we proposed, like inter-leaving concrete floors rather than laying an additional covering floor, using granulated concrete and isolation with cellulose. He was persuaded by studies and examples.

Great transformation

A great transformation during the design process was the separation of the offices into two wings. For this there were arguments in terms of the urban context as well as the fact the physical relations in the building would become too long.