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- Quantative vs Qualitive

Reflection
Vegetation

Missing a reason, validation for integrating nature into buildings
Research question

How to integrate nature with the architecture of interior and exterior spaces in buildings with high stress environments in order to harness the positive effects on the human psyche.
## Conditions

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<th>Soft fascination</th>
<th>Extend</th>
<th>Compatibility</th>
<th>Sense of being away</th>
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Toolbox
Rotterdam

INHABITANTS: 618,108
HOUSEHOLDS: 317,855
The Maas river
Wilhelmina pier
Urban fabric

Strips

Sightlines
Building heights
Public open spaces
Little quality
Network of parks
Opportunities
Masterplan
**Brief**

**Quantative**
- Dwellings
- Offices
- Public space
  - Small cafe
- Parking garage

**Qualitative**
- Restorative spaces
- Routing
- Connection with water
- Inside outside relation
Volume inspiration
Volume dimensions
Revolution
Three volumes
Cutting the volume
Elevated courtyards
Load bearing structure

Diagrid

=  

Diagonal grid
Diagrid

2 floors
8000mm
Vertical elements
Vertical elements
Diagrid size

2 floors
8000mm

4 floors
16,000mm
Exterior and interior diagrid
Load bearing core
Construction detail

Welded clutchplate
M20 bolts
Welded square pipe on diagrid node 320x320 mm
Steel sandwich panel
Exploded detail

1:50 model

Exploded diagrid node

Curved connection

Straight connection
Facade impression
Functions

- Dwelling
- Offices
- Public
- Parking
Restorative environments

Communal restorative space

Semi private restorative spaces

Public restorative spaces
Coherence

Connection with the sky

Connection with the wide open view

Connection with the water and the park
Coherence

Mountainscape

Heathland

Wetlands
Accessiblility

Connection with the sky
Connection with the wide open view
Connection with the water and the park
Communal restorative space
Semi private restorative space
Public restorative space
Connection with the sky and other views
Connection with the canal and the road
Connection with the sky and the skyway
Connection with the wide open view
Connection with the water and the park
Communal restorative space
Semi private restorative space
Public restorative space

Connection with the sky
Connection with the wide open view
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Communal restorative space
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Coherence

Mountain scape

Heathland

Wetlands

Caves
Routing
Elevators
Elevator cores
Basic Layout
3 elevators
Walking route
Public space
Breaking with the pier
Entrance
Transition inside outside
Vides as guide
Column structure
Transition - Vaulted ceiling
Transition - Landscape
Transition - Light
Indoor wetlands
Different routes
Level path
Sitting, viewing and resting
Tidal movement
Seating
Cafe
Pond
Pond
Seating near water
Prospect vs refuge
Elevated walkways
Public seating
Private seating
Heathland
The route for walking needs to be more prominent than the elevator
Precedent - ING Headquarters

Legend

- Atrium
- Vertical circulation stairs
- Vertical circulation elevator
- Unknown shaft
- Toilet block
- Multipurpose room
- Emergency stairs
Vides
Orientation changes

35 degrees
Exterior structure: Diagrid structure with square pipes 600x600mm. Concrete slab for fireproofing 120min.

Exterior facade structure: Steel HEB-320 beam 320mm. Reynaers CW-50 aluminium 50x160mm with a variable angle.

Interior floor structure: Wooden floor finish 20mm. Screed with floor heating 50mm. Rigid insulation 200mm.

Terrace structure: Hardwood decking 20mm. Wooden sleeper 40mm. ZInCo Elefeet adjustable.

Floor structure: Intensive green roof 200mm. ComFlor 225.

Interior facade structure: Reynaers CW-50 curtain wall exterior door on wood 50x100mm.

Ceiling structure: Soft insulation 80-150 mm. Nonius suspender adjustable. Wooden planks radial pattern 20mm.

Interior floor structure: Wooden floor finish 20mm. Screed with floor heating 50mm. Rigid insulation 200mm.

Floor structure: Intensive green roof 200mm. ComFlor 225.

Interior facade structure: Reynaers CW-50 on wood 50x100 mm.
Office space
Office space - layout 1
Insulation - flexibility

- Insulation - flexibility
- Nonius suspender
- Wooden plank 20mm
- CW-50 on wood 50x100mm
- Enamelled steelplate for fireproofing
- Wooden ratchet
- Steel anchor
- Flashing
- Folding anchor
- Concrete sill
- CW-50 exterior opening door
- Wooden finishfloor 20mm
- Concrete screed with floor heating 50mm
- Rigid insulation 200mm
- Rigid insulationblock
- Guard board
- Filter layer
- Root-resistant waterproof membrane

- Substrate 200mm
- Hard plastic edge piece
- Filter layer
- Drainage board
- Root barrier
- Root-resistant waterproof membrane
- Poured in place concrete layer 105-330mm

- Hardwood decking 20mm
- Wooden sleeper 40mm
- Zinc Elefeet adjustable

- Wooden finishfloor 20mm
- Concrete screwed with floor heating 50mm
- Rigid insulation 200mm
- Rigid insulationblock
- Guard board
- Filter layer
- Root-resistant waterproof membrane

- Poured in place concrete layer 105-330mm

- Soft Insulation 50-250 mm
Office space - layout 2
Office space - layout 3
Impression
Mountainscape
Mirror pond
Mirror pond
How to integrate nature with the architecture of interior and exterior spaces in buildings with high stress environments in order to harness the positive effects on the human psyche.
Reflection

**Soft fascination**
Vegetation
Water
  - Variation in the tides
  - Periodic waterfall
Inside outside relation
  - View
    - Temperature
Focus on the sky
Natural light

**Sense of being away**
Walking
Places to rest
Easy navigatable route
Creating different perspectives
Transitions
Separation of functions
Reflection

Extend
Linking to natural environments
Continuous route with transitions between the environments

Compatibility
Prospect refuge
Size variation
Sitting
Walking