ACTIVE AMSTERDAM

THE CITY AS A HEALTHY LIVING ENVIRONMENT
THE BLUE STAIRS
HEALTHY LIVING IN ACTIVE AMSTERDAM
Target group: city families

Definition of city families from the Research Report:
Parents work in the city centre and have a busy social life close to their homes. Family compositions are very diverse.

Large family:
For example two parents and more than 3 children or a composed family with children that come to stay in the weekends.

Middle size family:
For example two parents and one or two children or one parent with two children.

Small family:
For example a single parent with one child or a couple.
PC: Take aways from the Research Report on how to design child friendly living environments and family friendly dwellings that encourage physical movement on a daily basis.

**Child friendly living environment**
- Pedestrians first
- Sheltered, accessible, multifunctional public space with relation to the dwellings

**Family friendly dwelling**
- Storage space
- Space for safe play inside and outside
- Privacy for all family members
- Space for working at home
- Flexible and multifunctional use, changing with the families needs

**Encouraging active lifestyles**
- Intensifying of daily movements in and around the house
- Inside: Stairs as a space defining element which can double as space for storage, play or work
- Outside: Active routing system to and from the dwellings. Stairs and galleries double as place to meet and play.
- Extra: add active program like swings and slides or an attractive goal at the end of a route

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**Dwelling design** take aways
Dwelling design starting points

Stairs

The stairs inside are a space defining element in the living space and can have double functions. Stairs outside can double as a place to play or meet with good supervision.

Flexible and multifunctional spaces

The possibility of closing off a part of the living space to be used separately and without disturbing.

Collective outdoor space

The dwellings are connected to a inner street or gallery that is shared with their neighbours. All dwellings have a good view on these shared spaces which make them safe places for play and meeting.

Private outside space

Is an extension of the inside space
Can be well supervised from inside
Is a safe place for play
And a place for socializing and personalisation

Add double functions

Encorporate places for storage, work or play in the design. Use nooks, corners or spare space under stairs.

Change with the family

Large bedrooms can be changed into two small bedrooms or the other way around.
1. Volume: follow surrounding building lines
2. Access: pedestrian street
3. Outside spaces: contact and orientation
4. Tower: height accent on crossing
5. Wrap: protection from and reaction on context
6. Stairs: active routing systems

**Building volume concept**
Floor plan +2 1:200
Floor plan +5 1:200
Floor plan +7 1:200
Cross section 1:200
Longitudinal section 1:200
North façade 1:200
Dwelling design
Maisonettes
Dwelling design Maisonettes
94 m²
large family
2-4 bedrooms
94 m²
large family
2-4 bedrooms
or
middle size family
1-2 bedrooms + office

Maisonette streetside 1:50
Dwelling design Apartments waterside
61 m²
small family
2 bedrooms

Apartment waterside 2nd floor 1:50
61 m²
small family
2 bedrooms

Apartment waterside 3rd floor 1:50
Dwelling design
Apartments streetside
75 m²
middle size family
3 bedrooms
75 m²
middle size family
3 bedrooms

Apartment streetside 3rd floor 1:50
Dwelling design Apartments 4th floor
56 m²
small family
2 bedrooms

Apartment 4th floor 1:50
Dwelling design Corner apartments
45-70 m²
small - middle size family
1-3 bedrooms

Corner apartment 1:50
Energy generation

The energy that the building demands can be generated in multiple ways:

- PV panels are added to the rooftop terrace.
- The rest of the roof is covered with a Energy Floor system which generates energy from movement. When people walk over the roof and stairs, their movement activates the system and loads the batteries. This system can also be added to the sidewalks and the surface of the busy traffic crossed next to project location. It then uses the vibrations of the traffic to turn it into energy.

Energy tiles are not the only way to generate energy from movement, the Energieplein Kerckebosch-Zeist also applied WeWatt-bikes that give power to a WiFi hotspot on the square.

The generation of energy through movement can make the users aware of the positive effects of their efforts. If their efforts become visible or useful it can also be a stimulation to move more and be more healthy and generate energy at the same time.

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Climate systems
Loadbearing portal concrete structure
Secondary steel support structure
Secondary portal concrete structure
Trimmer to support floor slab
1. Look-out tower
Prefabricated concrete structure of columns and beams
Placed on top of structural grid and load bearing walls.

2. Central staircase
Self-supporting steel stairs
Every two floors a platform is connected to the load bearing concrete structure with a secondary steel construction.

3. Porch entrances
A secondary steel construction is added where the porch entrances intervene in the concrete load bearing structure.
A trimmer supports the upper floor elements.

4. Facade staircase
Self-supporting steel stairs
Every platform is connected to the load bearing concrete structure with a secondary steel construction.

Construction exceptions
All the escape routes are viable and residents can always escape two ways.

There are two staircases on both ends of the building. These two staircases can be reached from the ground floor and over the galleries of the second and fourth floor. The sixth floor has direct access to one staircase and can reach the second staircase using the public roof. The dwellings on the third, fifth and seventh floor are connected to the galleries by porche accesses.

Users of the public program on the roof can also escape two ways, in case of emergency they can also use the escape routes of the residents.

The parking garage in the basement is connected to the ground two staircases, but with different stairs as escaping residents from the upper floors do not end up in the basement. Two extra stairs connect the basement to the ground floor, close to the front doors. The two stairs also go directly outside.

Fire safety scheme
1. Primary load bearing structure
Prefab concrete floor elements + screed and prefab concrete walls including steel anchors cutouts to prepare for prefabricated facade elements.

2. Facade elements
Prefabricated facade elements consisting of concrete back construction, window frames including glass, insulation, aluminium substructure for facade cladding, and steel anchors for balustrades.

3. Facade cladding
On-site installation of aluminium framework around windows, facade cladding, balustrades, and aluminium cases.

Façade assembly diagrams
Opbouw buitengevel (prefab betonelement met aluminium gevelbekleding met felssysteem)

Aluform aluminium facade cladding with standing seam
Thermoclip substructure
Ventilation space
Aluminium wall brackets
Insulation 200 mm
Foil
Prefab concrete slab

Fragment 1:100
Fragment 1:50
Opbouw buitengevel (prefab betonelement met aluminium gevelbekleding met felssysteem)

- Aluform aluminium facade cladding with standing seam
- Thermoclip substructure
- Ventilation space
- Aluminium wall brackets
- Insulation 200 mm
- Foil
- Prefab concrete slab

Fragment inner facade 1:50
Roof:
- Topcoat colored EPDM Rubber granulate floor, non-skid
- Basecoat recuperation rubber granulate
- Primer (descending 16 mm/m)
- Energy flow tiles (200 mm total height of system)
- Insulation
- Vapor barrier
- Screed
- V&B Apartment floor 260
- Ceiling finish

Facade:
- Aluform aluminium facade cladding
- Dark patina finish
- Standing seam
- Thermoclip ventilated substructure
- Insulation
- Vapor barrier
- Prefabricated concrete slab

Energy floor tiles:
- (200 mm total height of system)

Reynaers SL38 Classic
- Aluminium window frames with steel look
- Triple glazing

DUCO Climatop 6.0 AK+
- Self-regulating, pre-heated ventilation grill
- High acoustic damping
- Self-regulating

Prefab concrete balustrade
- Steel anchor fixed onto structural floor

Detail 1:5
Floor finish
Fyber board subfloor
Qualitherm EPS30 dry floor heating system
Sound insulation EPS
Vapor barrier
Screed
VBI Apartment floor 260
Ceiling finish

Storczy flow
Floor finish
Fyber board subfloor
Qualitherm EPS30 dry floor heating system
Sound insulation EPS
Vapor barrier
Screed
VBI Apartment floor 260
Ceiling finish
Steel balustrade
Steel mesh infill 100x25 mm
All black powdercoating

Gallery floor
Topcoat extended EPDM Rubber granulate floor, non-skid
Basecoat recuperation rubber granulate
Primer (descending 16 mm/m)
Insulation
Vapor barrier
Screed
VBI Apartment floor 200
Ceiling finish

Facade
Glass fibre reinforced concrete facade cladding
Aluminium ventilated substructure
Insulation
Vapour barrier

DUCC Climatop 60 AK+
Self-regulating, pre-heated ventilation grill
High acoustic damping
Self-regulating

Reynaers SL38 Classic
Aluminium window frames with steel look
Triple glazing

Steel anchor fixed onto structural floor

Detail 5 1:5
Impression inner street
Building model seen from the south
Building model seen from the north
Building model seen from the west
Roof garden
Bicycle parking
Public active route
Apartment interior
Apartment access
Gallery

Fragment model details
Facilities for play are included in the design

The plinth of the building includes multiple entrances and takes over the scale of the surroundings

On top of the building is a viewing tower

Multiple public and collective outdoor spaces are added on the roof and area street

Collective spaces are located on both ends of the building

There is a green garden at the back and a green roof terrace

Bike storage is located in the basement

Places for play in the back garden, on the galleries and on the roof

Cars can be parked in the basement

The back garden and roof garden provide possibilities for gardening

Fitness spaces and a rest space are added to the design

On the roof active program, like bootcamp obstacles, is added

The building is on a crossing with many public transport stops

The stairs and view tower are added and accentuated to activate passersby

The terraces and gardens are oriented towards the sun

The building volume reacts in shape and height on the surrounding buildings