



Westpolder Bolwerk project

Former municipality of Berkel Rodenrijs, now part of municipality of Landsingerland.

Design: 2002 - 2014
Construction: 2005 - today
Program: 1500 dwelling units
more than 1000 completed and inhabited

Henk Reijenga

URBAN DESIGN AND ARCHITECTURAL
SUPERVISION



Overview

“Unity in Variety” (H.P.Berlage)

Architects

Van Manen Architects,
Henk Reijenga,
PBV Architects,
Schipper Architects,

Noordwijk
Voorburg
Wassenaar
The Hague

Clients

Amvest,
Kavel Vastgoed,

Amsterdam
Rijswijk



Regional situation

Landsingerland is part of the Metropolitan Region Rotterdam-The Hague. Most of the residents of Westpolder Bolwerk come from these two large cities.

Railroad connection

The centre of each of these cities can be reached in fifteen minutes by the regional railroad system which has a station at the edge of the new neighbourhood.

A separate project

The railroad station together with a small shopping centre combined with apartments have been built as a separate project and are not part of the urban design discussed here.



The Urban Fabric

The entire project is executed in a number of phases. These have not been designed as distinct neighbourhoods with their own architectural signature. The aim was a coherent and continuous fabric, in which one always knows where one is because specific locations have their own variations in the layout of the public spaces.

The project consists of low rise buildings, mostly houses of different kinds. About twenty percent is small apartment buildings, up to four floors high, containing no more than ten units and distributed across the entire plan.

The residential formats are diverse: For sale or for rent; expensive or affordable; for families, elderly people or starters.

The architecture is one of tiled roofs, brick walls and wood window frames.

The urban design is characterised by easily recognisable and well conceived “urban spaces”: street, canal, lane, park, square.

Together these make for an interesting and varied pattern of public spaces and buildings: *the urban fabric*.



The straight major canal (lower picture) is part of the regional water infrastructure and is 8 meters wide.

Not connected to that larger system are several independent local water systems. As in the one shown in the upper picture, each of these form a continuous loop like a radiator system that is fully integrated with the urban design. The water is circulated by a single pump and cleaned as it moves through the pump as well.

Such a loop is called 'singel' a term which strictly speaking translates as 'moat'. While a moat is usually part of a historic urban defence system we will stay with the new use of the Dutch term in reference to this urban plan.



The 'singel' in this example is a narrow channel of 5 meters wide which broadens to 10 meters where the water contributes to an urban space. The broader stretches have a street along one side and enhance the privacy of the backyard gardens on the other side.

The urban blocks formed by the 'singel' have either a road in the middle of the block or one around the periphery related to the water.

See more images of the various uses of open water in the next pages.

Open water systems

In the Netherlands, the National Water Management (Waterstaat) requires a certain amount of open water to enable it to drain and manage the below sea polderland.



The central canal

The streets on both sides of the canal are only accessible for pedestrians and bicycles.

Inhabitants park their cars in their backyards which are accessible via a semi private backroad.

See also page 19 on parking



The central canal

Bridges in the plan need to be a certain distance above the water surface to allow boats for maintenance to pass.

This one bridge was kept lower to avoid an awkward crossing by bicycle riders caused by the short distance from the house fronts on both sides. So it became a draw bridge.



The central canal

In winter, when the ice is strong enough for skating, the drawbridge goes up.

Note the apartment buildings at the corners of the blocks. This relation is a consistent pattern throughout the plan.



The 'singel' water system

At the end of a block the water is narrow to broaden to 10m around the corner.

Note the 'semi detached' or 'duplex type' houses across the 'singel' with their backyards connecting to the water.



The 'singel' water system

Another view on a 10meter wide stretch of the 'singel'.

On one side of the water are houses with narrow front yards at the street and on the other side backyards meet the water and houses are entered from a residential street in the middle of the block.



Characteristic living situations

Relating to the water



Characteristic living situations

Living at a 'singel'

There is no parking along the singels.
(For parking see page 17)



Characteristic living situations

Living at a residential street.

View of a road in the middle of a block.
Residential streets as well have no parking.

Front yards are private territory.
Plantings and trees are selected and taken care of by the inhabitants. They provide privacy for houses facing one another.



Characteristic living situations

Living around a green space.

'Triplex' houses (three units under one roof) overlooking a park seen from across the main canal.



Characteristic living situations

Living at an urban 'village' square.

Row houses

Semi-private parking is possible here.

There are also small playgrounds separated from the cars by trees, plantings and light posts.
"playing at the front door"

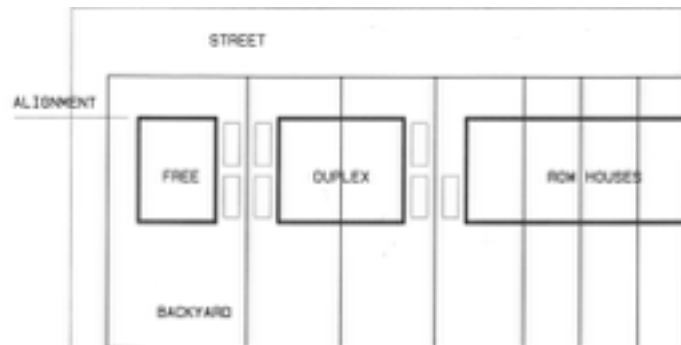


Characteristic living situations

Residential street along another “singel”

The bridges give access to two squares of the kind shown on the previous page.





PARKINGTHEME 1
2 PARKING-PLACES BEHIND THE ALIGNMENT

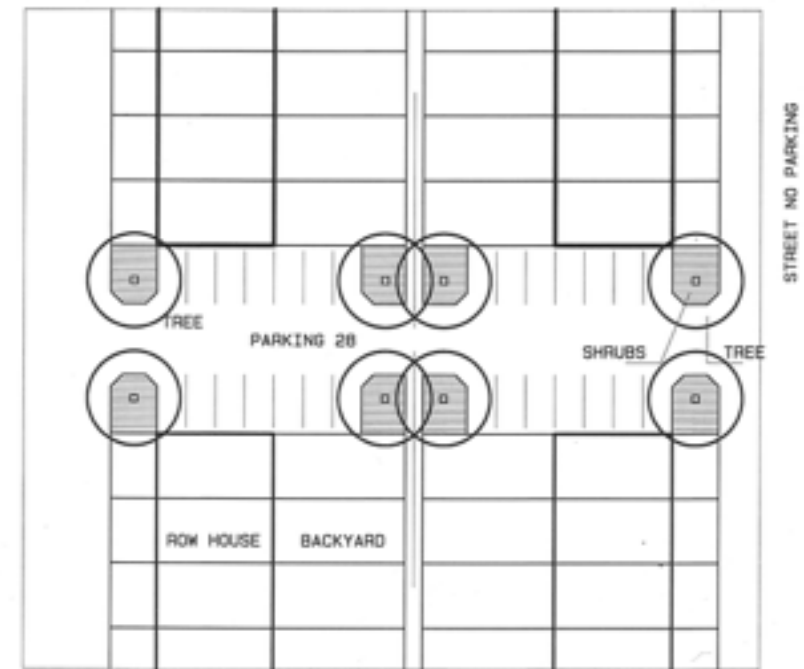


Parking, theme 1

The urban design makes parking on the public streets unnecessary.

Where houses are free standing or semi-detached, parking for two cars behind the facade alignment was required.

This also goes for most row-houses at the end of a row. These end houses usually have a special feature like an extension or a bay window.



PARKINGTHEME 2

Parking, theme 2

Where private backyards of row houses are not accessible for cars, the row house blocks are interrupted with collective parking places that are accessible from the streets but separated from those streets by plantings and trees.



Parking, theme 3

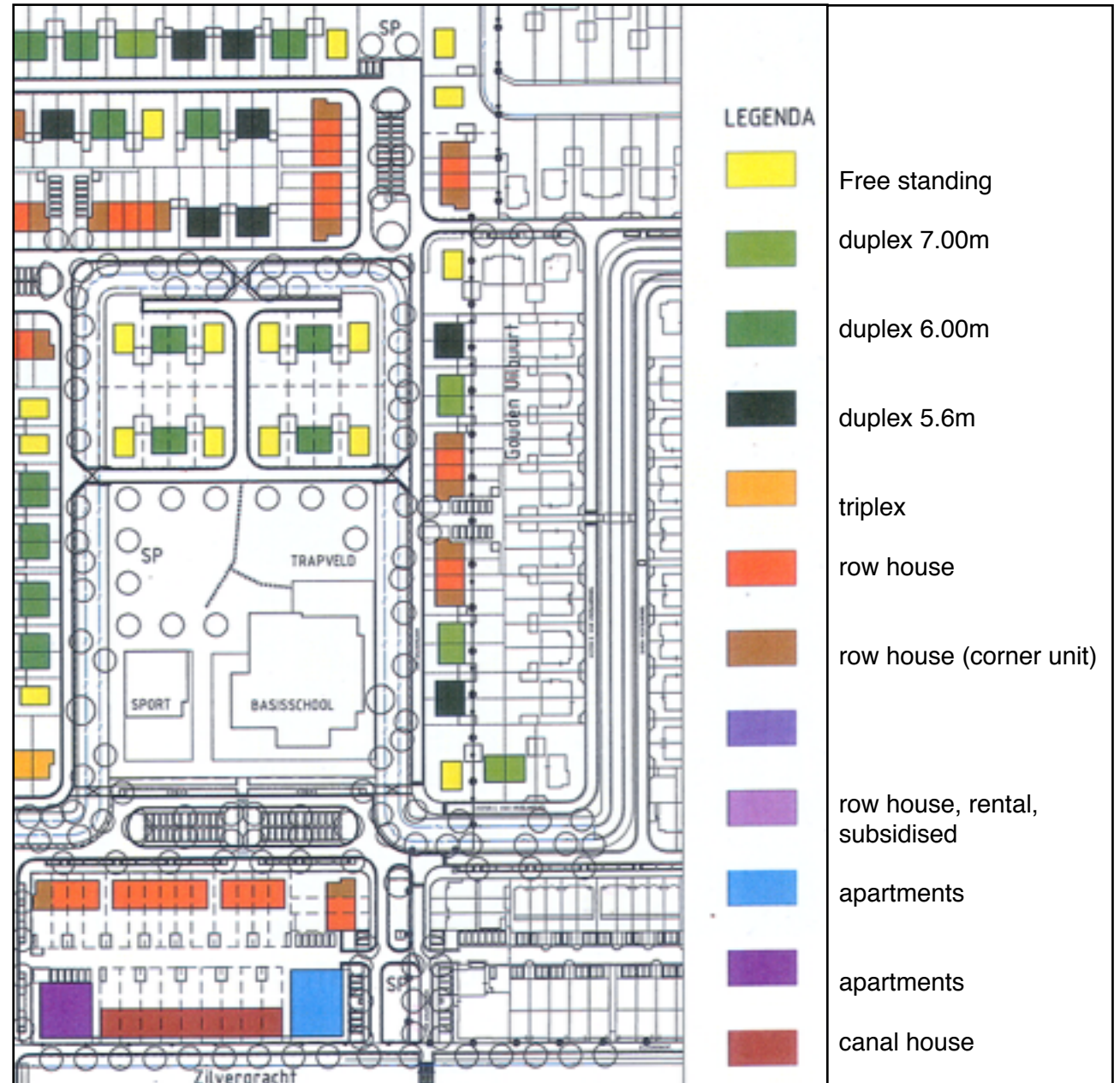
Behind the long stretches of canal houses that have their front at pedestrian streets along the canals, parking on private backyards is possible via collective back streets.

Reijenga, as supervisor, defined twelve kinds of houses, identified by variables like architectural typology, size, subsidised or for sale. See legend on the right.

For each phase the architects for the house designs were asked to submit several different designs for each of the twelve kinds of houses.

The supervisor decided on the location of each of the house designs, making sure that they were thoroughly mixed within a neighbourhood.

Twelve kinds of houses





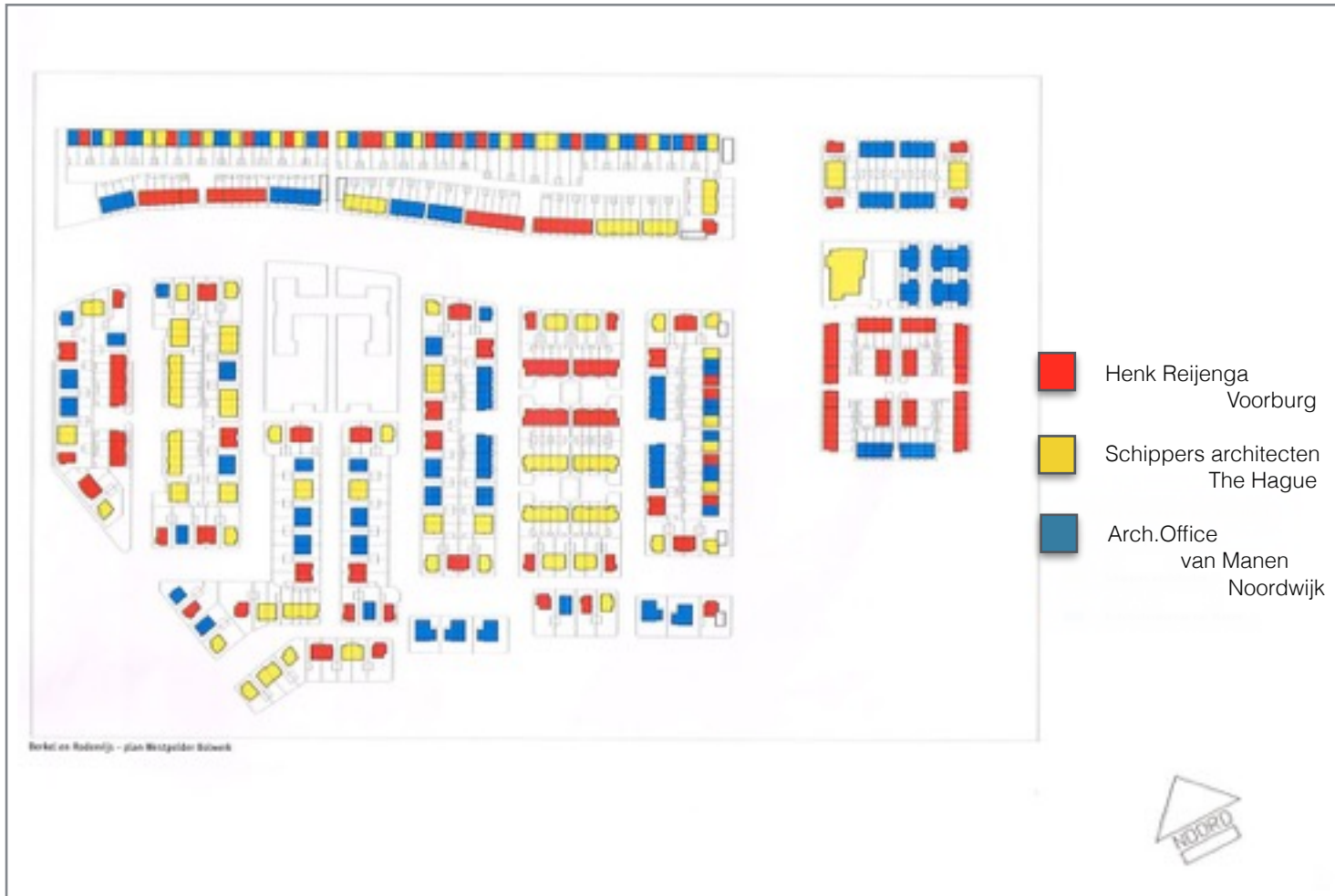
Distribution of houses

Illustration of the distribution in phase one.

Intention was to have a reasonable mixture of price categories as well as dwelling type.

For each phase of about 500 units, each architect designed several variations on each of the twelve house categories. The distribution of these designs was done by the supervisor.

For all houses, either expensive or affordable, the same materials and details were used for facades and roofs.



Distribution of design tasks phase one.

The same neighbourhood as shown on the previous page, but now colours indicate who designed what.

Purpose:
'village' environment.
Small scale
Locally recognisable places
to be achieved by much variety within a coherent whole.

Variation:
On three levels:
A. urban environment
B. Building level
C. Interior and exterior options available to buyer.

Agreements among the Architects

Architectural elements and materials.

All houses have roofs of 45degrees slope.
Roof tiles will be terracotta and be chosen from three pre-selected colours.

Five front door frame designs to select from in three available colours for the doors.

Exterior walls are in brick masonry.
There are five colours of brick to select from.

Window frames and front door frames will be in wood and with standard detail for the connection in the wall.

All wood in off-white colour.
Exterior drain pipes in dark gray pvc.

The selection of bricks, roof tiles, and all colours was based on group discussions and collective visits to showrooms and providers.

Architects were free to design and detail:

Window frames, gutters, canopies, roof overhangs, bay windows, etc



The supervisor architect would decide:

The distribution of the house types in the urban field. (See page 21)

The distribution of the individual variants of the types done by the architects

The colour selection of roof tiles and bricks for each building

However, buyers of free standing houses could select colours for brick masonry and roof tiles
Buyers and renters could select there door colour.

These agreements were made to obtain variety so that no two houses would be exactly alike, and that none of the available colours or designs were clustered.
But also to assure that this variety would result in a coherent environment.

At the same time the implied selection limitations and design constraints made efficient execution possible for the builder who was assured of no surprises in the details and selection of materials and colours in the various designs.



Various kinds of houses

Left: row houses.
Note the additional treatment at the end of a row.

Right: canal houses.
Designed as individual houses.



Various kinds of houses

Semi-detached or 'Duplex' houses

The shown examples are stylistically somewhat related to the pre-war "the Hague school".



Various kinds of houses

Left: Ten apartments in the affordable subsidised rental sector.

The building makes for an urban ending of a two story street wall.

Right: Eight luxury apartments at a park.

In the background houses at the canal.



More views

Wooden pedestrian bridges add a variety of possible walks through the neighbourhood.



More views

Entry towards the school via a pedestrian bridge across the Northern part of the Southern Singel, named 'Spoorsingel'. (see also page 2)

At the background free standing houses and semi-detached houses at a playground.





More views

The Spoorsingel with one of the road bridges crossing it.

A 6m wide connector road runs along the North. It has a speed limit of 50km/h. with parking available at the North side.

In residential streets along all singels a 30km speed limit assures no noise problems.





More views

Free standing houses with gardens at the singel.

Note the extension enlarging the living room into the garden. An extension of 1.5 or 2.5m was an option for all two story houses.



Overview

Air view from 2012.

To the left and foreground the completed first phase. To the right the second phase partly completed and partly in construction. Beyond that at the edge of the photograph the field for the third part still in the design stage.