



# Structuralism in Amersfoort, Leusden and Hoevelaken between 1960 and 1994

The 1960s and 1970s were a time of innovation and emancipation. And a time when new forms of living and working were explored and realized. This architecture route leads past unusual projects in Amersfoort, Leusden and Hoevelaken that are considered part of the architectural movement "structuralism".

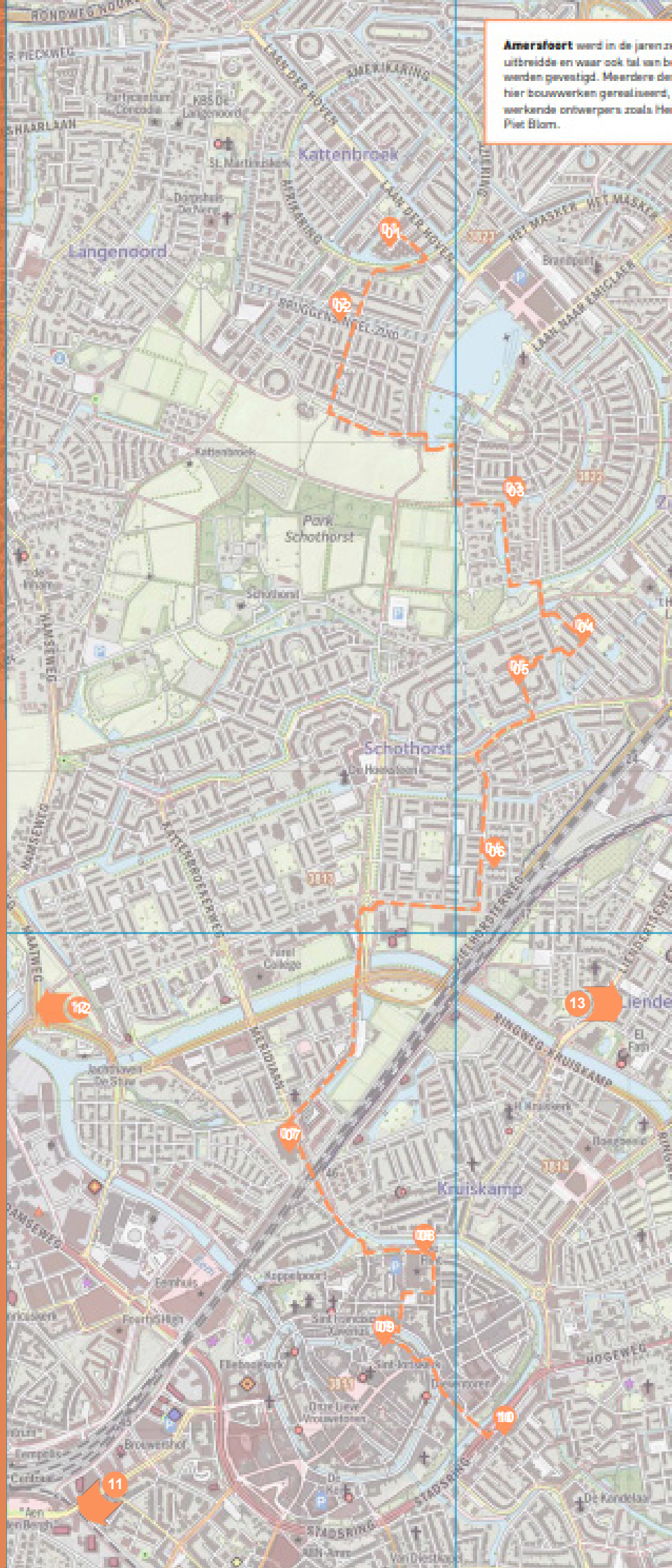
Neighborhoods and buildings constructed according to structuralism principles are built, often consist of several smaller units that together form a structure shapes. Small and large spaces become in tight, geometric patterns organized, and in the process the human touch.

In response to the large-scale, often uniform housing production of the postwar period, architects in the late 1950s called for more attention to small-scale health and for other forms of living and working.

Man is a social being and architecture and urban planning should provide places where there is room for meeting and for multifunctional use.

In 1960, architect Aldo van Eyck realized the Burger orphanage in Amsterdam. The building is composed of small units grouped around several patios and a courtyard. The remarkable project inspired peers and is considered the first example of structuralism in our country.

Structuralist projects share designers' lust for experimentation and pleasure in shaping homes and offices in a particularly spatial way give. Vides, split-level cross-sections, interior streets, flexible floor plans, affordable and characterful homes, attention to handcrafted details and honest, natural-looking materials are shared ingredients of this extraordinary architectural period. This map illustrates the broad spectrum encompassed by structuralism: from business office buildings to romantic palaces. Several projects included on this road map attracted international attention at the time.



Amersfoort werd in de jaren 60 uitgebreid en waar ook tal van bouwwerken werden geventild. Meerdere daarvan zijn bouwwerken gerealiseerd, werkende ontwerpers zoals Henk en Piet Blom.



**1**  
**De Gesloten Stad (1993)**  
 Laan der Winden, Kattenbroek, Amersfoort  
**Piet Blom**

The Closed City is a late variant of The Kasbah in Hengelo, the project that made architect Piet Blom famous. Blom sought living and working environments that promoted social contacts. The principle of houses on columns above a covered publicly accessible meeting space, is an elaboration of his 1965 study "Living as an Urban Roof". The Closed City is the last "urban roof" that Blom was able to realize. Originally 130 live/work dwellings were to be built, but in the end no more than 33 were built. Moreover, because the dwellings have not been carried out entirely according to his ideas, Blom removed himself from the project withdrawn. However, that did not diminish the principles of his design. The three-story houses are arranged like a circle around a courtyard reminiscent of a village green. Because all the houses are fused together, it is not clear where one house starts and another stops.



**2**  
**Bridge houses Kattenbroek (1994)**  
 Bruggensingel-Zuid, Bruggensingel-Noord,  
 Kattenbroek, Amersfoort  
**Leo Heijdenrijk**

Houses or other buildings on top of a bridge are common. However, houses in the shape of a bridge are unique. Here the bridge is not a connecting but a dividing element, because halfway across it there is itself the building wall. This was also criticized at the time in the trade. The bridge houses would take away any view of the water and the spatiality of the neighborhood would be curtailed. Despite the criticisms, the bridge houses have striking spatial qualities. With their small corner turns, they form a tight but at the same time lively series of building volumes. Because the narrow side of these linked houses faces the street, they have the appearance of small, detached houses. The living spaces are on the water and barely facing each other, providing a sense of privacy. The clear, simple design of a closed, masonry section on land and an open, glass section above the water, reinforces the interconnectedness of a continuous structure.



**3**  
**Russian Palace (1993)**  
 Hausmannstraat 22, Amersfoort  
**Piet Blom**

A remarkable version of structuralist architecture is the villa Piet Blom designed for Russian pianist Yenna Prusha. A tall music room forms the heart of the house, but it is not visible from the street. Structuralism can be seen in the angled rooms, the split-level construction and the repetition of spatial elements. Attached to the house is a gatehouse with a classroom and a dovecote. The grounds are enclosed by a wooden fence matching the architecture. The villa neighborhood where this home is located, represents a sampling of architecture from the 1980s and 1990s. The municipality wanted to encourage quality and variety of architecture here. Future residents could choose from 19 well-known architects and had their homes designed by him or her.



**4**  
**Housing 'Het Gein' (1986-89)**  
 Schothorst-Noord, Amersfoort  
**Herman Hertzberger**

Residential neighborhood 'Het Gein' is located near Amersfoort Schothorst Station. It is also called the 'Jazz neighborhood' because streets bear the names of famous jazz musicians. Both the urban plan and the 458 homes were designed by Hertzberger. 'Het Gein' has an idiosyncratic structure consisting of parallel residential streets. Halfway through the neighborhood, the streets are intersected by a green strip, which widens in the middle of the neighborhood into a small park. The edges, to which the streets connect at oblique angles, also consist of a series of smaller green spaces. On the side of the station, the neighborhood is terminated by an almost semicircular three-story apartment complex whose concave side connects to two residential streets. The convex side faces the station building. Many of the ground-level two-story homes have now received a third floor.



**5**  
**Central Living 'Het Hallehuis' (1976-84)**  
 Sandenburg 20, Schothorst, Amersfoort  
**Dolf Floors**

As a central-housing project, the Hallehuis fits well with structuralism: a complex with multiple dwellings and communal facilities. The dwellings are divided into two blocks, each with three residential groups. The blocks flank an internal street onto which the residential entrances lead. At the rear there is a communal garden and a vegetable garden. Each resident has his or her own apartment and in addition, each living group is equipped with a shared kitchen, dining room and living room. The project was developed in cooperation with the future residents and was completed in 1984 after a preparation period of eight years. The project is flexible: basic units, suitable for one to two persons, can be combined with other rooms. This makes the complex suitable for households of different sizes. However, striving for a diverse resident population has proven difficult. The number of families with children has declined sharply over time.



**6**  
**Double residential house (1972-75)**  
 Uilenspiegelstraat 5-7, Amersfoort  
**Leo Heijdenrijk**

In a street of two-story houses in the Schothorst neighborhood, Leo Heijdenrijk's double house definitely stands out. First of all, because of the wooden debris construction of the front facade with the black window frames and panels, originally consisting of horizontal scrap metal. Also striking are the pivot windows that are executed as closed, red-painted panels with one or two portholes. The cross-section with the capped ridge and partially flat roof at the rear is also uncommon. At the front the low windows of the basement are visible, at the rear the living room is adjacent to the garden. This solution is possible thanks to the staggering of the floors by half a floor height. Through an open stairwell halfway up the house, under the flat part of the roof, all rooms are accessible.



**7** **LTS De Koppel/Het Element** (1969-78/1983)  
Hooglandseweg-Noord 55, Amersfoort  
**Jan Verhoeven**

The architect owed this major commission at the beginning of his career partly to his father, who was on the school board. The school building initially consisted of only one floor with classrooms on either side of a wide corridor. This corridor is laid out like an inner street with toilet blocks and other sub-rooms in the middle and wide staircases to the mezzanine floors and the second floor. This second floor has a narrower corridor, so that the school has a stepped cross-section crowned by seven volumes with overhead lights. The building's columnar structure has determined its facade appearance. Visible white-painted concrete columns and gable beams provide a tight rhythm. The infill with a darker concrete brick fits well with the businesslike design. The frames with the many movable windows contribute to the graphic character of the facades. This is structuralism in an unaffected rational form, which fits well with the technical education provided here.



**10** **Council of Labor** (1984)  
Stadsring 181/183, Amersfoort  
**Fokke de Jong en Hans van Olpfen**

The structure consists of two parallel, offset parts. The two parts of the office appear to be composed of separate elements, but this is only appearance. The facades are composed of a series of generous bay windows that give the building a structural appearance. But instead of towers with voids in between, here the office floors simply run through. The southern wing is on the building line, the northern wing is further back creating a front space with street parking and a ramp to the parking basement. The two sections are connected by an element with elevators and stairs. Originally, the building was designed as the offices of the Council of Labor. It then housed the Social Insurance Bank, after which the building became a business building. Like several office buildings on the City Ring, this office building has now been transformed into a residential building.



**8** **Cultural Center 'The Flint'** (1974-77)  
Coninckstraat 60, Amersfoort  
**Onno Greiner, Martien van Goor**

The aerial photograph of The Flint shows the influence of architect Aldo van Eyck on the original design of this theater cum arts center. The large building consists of several small units, linked together by repeating building volumes. The complex is based on a pattern of squares, most of which are capped with a gently sloping pyramid roof. Larger building volumes were given a series of smaller roofs. Interior streets provide access to a large auditorium, theater, bar and creative center consisting of multiple work spaces and studios. The small-scale architecture, originally executed entirely in brick, sought to connect to the character and structure of the inner city. The architect called De Flint a 'city of play', entirely in the spirit of that time in which the 'person playing' was central. This also included the combination of professional art in the large halls and amateur art in the smaller rooms along the edges of the complex. After a fire in 1990, part of the building was modernized by Greiner and Van Goor. This was followed in 2014 by a major front renovation in which the entrance, restaurant and foyers were completely redone. Both modifications were done in glass and sheet metal.



**11** **DHV Headquarters** (1967-70)  
Laan 1914 35, Amersfoort  
**David Zuiderhoek**

The headquarters of Royal HaskoningDHV is one of the most successful office gardens in our country. It is composed of an airy, triangular pattern of columns with hexagonal floor fields and curtain walls. The central entrance hall is large enough for all co-workers to gather or hold concerts, for example. At the time, 600 employees worked here. The three storey floors of 2,000 m<sup>2</sup> each, are split-level relative to each other with voids between them. The hexagonal structure is also expressed in the facade, resembling a meandering series of bay windows. These form natural leads for workplaces. Zuiderhoek says of his design, entirely in the spirit of the 1970s: 'I am rather attached to this building, almost because it is not architecture. And let's be honest, isn't the greatest task for the architect to step back as much as possible?' After forty years, the building renovated. In the process, the single glass was replaced with double glazing and the heating units were removed from the facades. This also allowed the parapet to be made of glass. The appearance of the building may have improved even more, thanks to architect Roel Brouwers.



**9** **Stad van Cahen** (1976-88)  
Muurhuizen 104, Amersfoort  
**Abel Cahen**

This former office of the National Service for Archaeological Soil Research was designed as a city within a city. Alleys, gates, towers, a square and detached houses define the urban structure, matching the size of the medieval center. The various thoroughfares on the first floor are public, connecting the building to public life. At the same time, according to Cahen, the building is also a house. As a "living room," the high central space brings all the rooms and users together. From different heights, the building is experienced spatially in a different way. From the outside, you can see you pass through the gates into the central hall. Inside, the eye is drawn upward: the glass dome is unmissable, while from the upper floor one looks right at the artwork on the floor by Jan Dibbets. The concrete-brick building initially met with much resistance, but has gradually won its place on the Muurhuizen. The harmonious facade layout with the round columns so characteristic of Cahen, concrete parapets and special windows, certainly contributed to this. Since 2009, the building has been home to several cultural and civic organizations.



**12** **Headquarters Fläkt** (1972-74)  
Uraniumweg 23, Amersfoort  
**P.J. Gerssen**

The client was Fläkt, a Swedish company in air circulation systems. The building was far ahead of its time in design and technical ingenuity. The next user was the firm Crop, accountants and financial consultants, who left the building in 2000 and it has been vacant ever since. In late 2016, the building was listed as a municipal monument but the vacancy has not done the building any favors. The Fläkt building consists of three cylinders, each 20.6 meters in diameter, which form one large office garden per floor, but can also be partitioned. The cylinders do not touch and are connected by a triangular tower, a prism, whose vertices coincide with the centers of the cylinders. The triangular building section houses the elevators, stairs, toilets and a pantry. The office section stands in a pond and rises from the water via columns. The entire building is constructed of precast concrete elements. The low and wide windows are at the eye level of employees sitting at their desks. The aluminum facade panels reflect sunlight and keep the building cool in the summer. Thanks to the air cavity behind these plates, the building stays warm in winter. Originally, the air was exhausted through large lampshades above the desks.



**13** **De Groene Stee** (1976)  
Wiekslag 92, Liendert, Amersfoort  
**Bob Dogger**

De Groene Stee in Liendert is a characteristic example of structuralism in Amersfoort. It was designed by Bob Dogger, the last designing city architect of Amersfoort. The building consists of a collection of smaller building volumes of different heights, with its own pyramidal roof terminated by a skylight, also called a lantern. Each building volume consists of masonry disks and hooks with facades with open and closed sections in between. The different volumes together form a larger whole, but remain recognizable as independent units.

De Groene Stee was designed as a neighborhood building and is still in use today as a meeting place for the neighborhood.



**14** **Kantemars housing complex** (1984-85)  
Huijgenserf 22-60, Hoevelaken  
**Jan Verhoeven**

This project for 20 HAT units (Housing Single or Two Person Households) consists of ten square turrets with a gently sloping tent roof. They are divided into two groups, with the middle turret pushed in at the corner. The resulting two hooks form the head of Huijgenserf. All dwellings are accessed on the outside of both hooks, in fact via a back street along the backyards of adjacent homes. Each turret consists of a lower and an upper house. The upper dwellings are accessible in pairs by a vertical staircase; only the middle upper apartment has its own staircase. On both the front and back façade are storerooms, which on Huijgenserf are equipped with a terrace for the upper apartments. The appearance is sober and the whole makes a somewhat stocky impression because of the low gutters, just above the window frames on the floor.



**HOEVELAKEN** was where the New Housing Forms Foundation was founded in 1968, with local architect Jan Verhoeven as an important member. He designed several small-scale housing complexes with crystalline floor plans, generous voids and striking skylights in the form of lanterns. His designs represent the more romantic angle within structuralism, although Verhoeven wanted nothing to do with that designation.



**15** **Residential houses Veenslagenweg** (1982-85)  
Veenslagenweg 142-164, Hoevelaken  
**Jan Verhoeven**

The twelve homes on Veenslagenweg are divided into four circle segments with three homes each. The circle segments enclose a courtyard designed as a parking plaza. The gardens are on the outside. As a result, there are many fences along the public space. Seen from above, the four segments form a four-leaf clover. Each segment has three kinks, so that each house has its own kink. The building walls remain at right angles to the facade. The bedrooms on the second floor are rectangular and the remaining space contains the staircase and the bathroom. On the second floor both bedrooms are turned a quarter turn due to the steep, high roof with gutter just above the first floor window frames. A real estate agent advertised these homes with the slogan: "Intended for imaginative people, who are definitely not looking for a straightforward home."



**16** **Atelier house(s) Verhoeven** (1964-71)  
Park Weldam 10a, Hoevelaken  
**Jan Verhoeven**

Originally, the architect lived here. At the transition between the two perpendicular wings was the square studio, where the architect's office was located at the time. Apart from the entrance hall on the forecourt, the entire floor plan consists of a system of several small squares and three large ones: the two living rooms and the studio. The large squares are capped with a pyramid roof, with a lantern at the top. The atelier roof has four skylights. The living houses are located around a square, the bedroom and kitchen are located around a "living square," and the living rooms and children's rooms are located around a patio. In this way, there is always a relationship between different spaces in the house. Such a grouping suited Verhoeven also applied in his subsequent residential and school designs. Traditional wood and brick materials and artisanal construction and detailing are recurring elements in his designs.



**17** **Housing complex** (1966-75)  
Kyftenbeltlaan/Van Dedemlaan/ Laantje van Hilhorst, Hoevelaken  
**Jan Verhoeven**

The homes on Kyftenbelt Avenue were built in three phases. The first two phases were built between 1968 and 1972, the third in 1975. The first phase consists of meander-shaped linked and mirrored houses with garages. Turning the garages 45° from the common building walls creates a meandering structure with common front plazas. The floor with lantern contains a work/bedroom and the other half is the void of the living room. Thus, direct daylight enters the central part of the house and the upper room has a view of the neighborhood squares.

In the second phase, four houses each are linked in the shape of a trefoil with an open space in the middle divided into four patios. These houses also feature narrow upper rooms in the form of a lantern above the garages and living room. The houses in phase 3 contain a full floor designed entirely as a hood with roof windows. All homes are constructed of brownish-red brick with wooden frames, windows and doors. In the characterful interiors, the beam structures are left exposed.



**18** **Residential houses Bijenvlucht** (1974-77)  
Bijenvlucht/Horstpad, Hoevelaken  
**Jan Verhoeven**

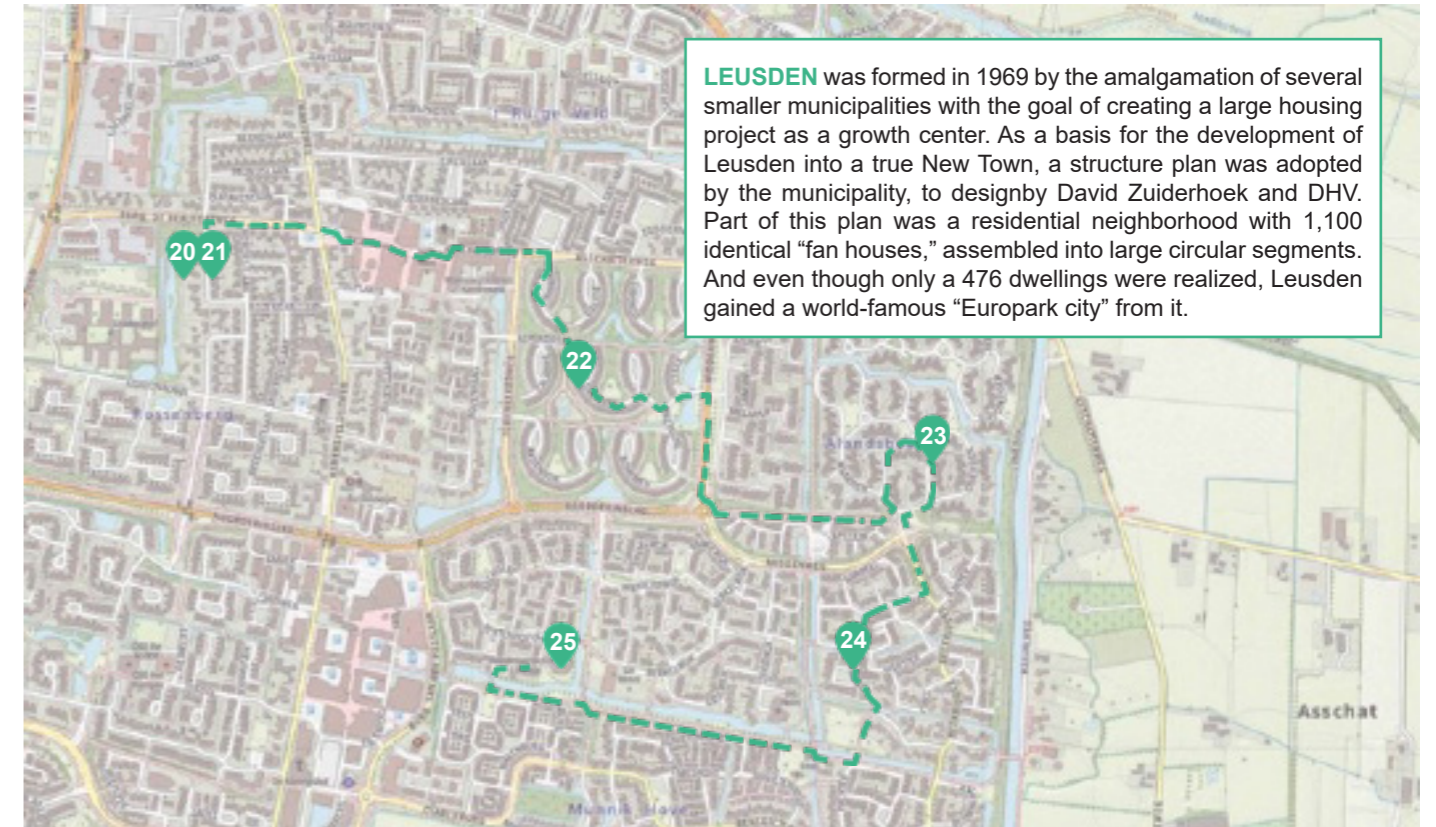
The five attached houses on Bee Flight are part of an octagon, creating a semi-open court. The original design assumed seven homes resulting in an almost closed court. The current court has a clear center point from which the mirrored access and garage paths fan out to the houses. As is often the case with Verhoeven's designs, the rear gardens border the public area.

Each house consists of three parts, two rectangular parts that contain the entrance hall and garage, with an octagonal living space in between with an also octagonal loft. Because of the dimensions of this gallery and its visual relationship with the living room, it forms an additional "free" space. The octagonal part of the house is in the facades. Recognizable by the vertically continuous glass facades designed as a kind of bay window, behind which is located the spiral staircase. This provides access to the sun terrace, which is hidden behind the roof shields.

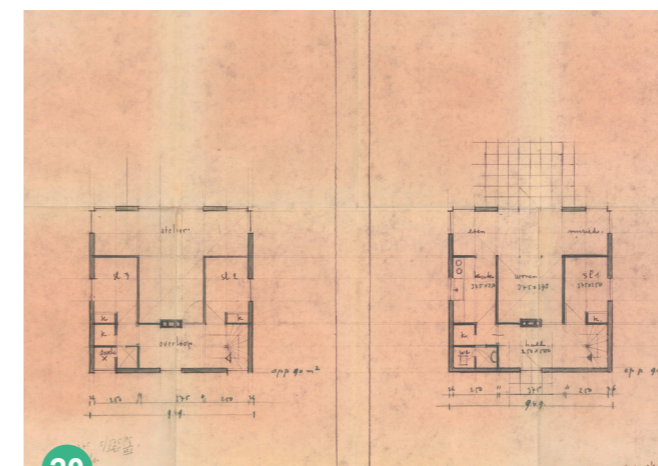


**19** **Residential houses Bijenvlucht/Reeënspoor** (1975-77)  
Bijenvlucht/Reeënspoor, Hoevelaken  
**Jan Verhoeven**

Two homes form an unusual semi-detached house. They share the octagon theme with the attached courtyard homes across from them. But while the court houses face the road with a glass facade, these houses, on the contrary, form a more closed facade along the road. On Bijenvlucht is a square house with an octagonal atrium located inside the house, around which all the spaces are grouped. The adjacent house on Reeënspoor has an open patio that covers five-eighths of an octagon and faces the garden on the street. Both houses are partly one and partly two stories high, which, with the various pent roofs, creates a varied roofscape



**LEUSDEN** was formed in 1969 by the amalgamation of several smaller municipalities with the goal of creating a large housing project as a growth center. As a basis for the development of Leusden into a true New Town, a structure plan was adopted by the municipality, to design by David Zuiderhoek and DHV. Part of this plan was a residential neighborhood with 1,100 identical "fan houses," assembled into large circular segments. And even though only a 476 dwellings were realized, Leusden gained a world-famous "Europark city" from it.



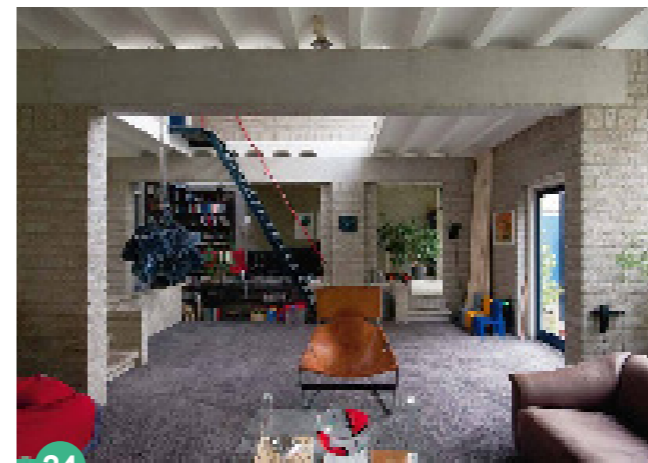
**20** **Carree residential house** (1960-62)  
Princenhoflaan 6, Leusden  
**Jan Verhoeven**

In the design of this house, the architect applied for the first time a roof in the form of a pyramid roof. This covers the centrally located square living room, with the fireplace in the middle whose chimney protrudes through the roof as a square block. Opposite each other on the street side are the garage, entrance and kitchen, and on the garden side are three bedrooms and a bathroom. The short sides connect to two terraces that are accessible from the living room through two glass fronts. These outdoor spaces are made part of the house, because the eaves of the hook-shaped building parts continue as a kind of pergola.

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**Tonneman residence** (1962)  
Princenhoflaan 8, Leusden  
**Jan Verhoeven**

Two hoods in the form of identical, oblong hipped roofs together form one dwelling. Under one roof is the living room as one large room, under the other are grouped the bedroom and bathroom. Between the two pitched roofs is a flat-capped intermediate section containing the entrance hall and a drying room. A hook-shaped also flat-capped extension houses the kitchen, utility room and garage. This hook folds around the open entrance area to the house. This has since been added to the house and a floor was built above the living room by lifting the roof.



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**Egelwier** (1975-82)  
Egelwier 1 t/m 11, Leusden  
**Hans Ruijsenaars**

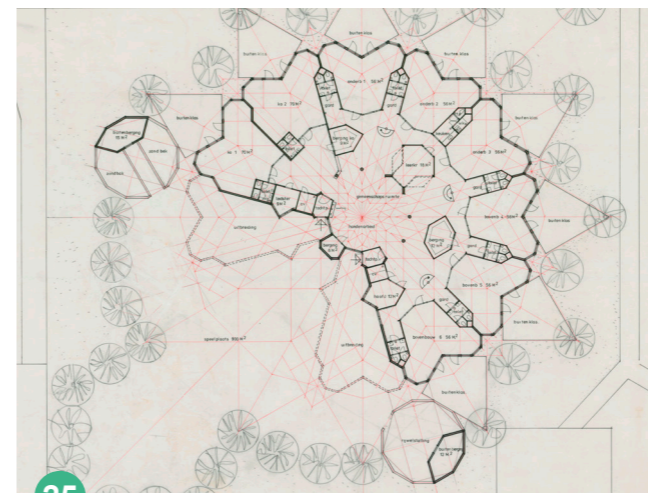
The Egelwier is an early example of Collective Private Contracting. The architect designed the semi-open green courtyard for a collective of eleven families. The buildings consist of a hook-shaped cluster of houses, executed in gray concrete brick. Notable are the garages in the front facade and the recessed house entrances, which correspond to balconies on the floor. The houses have nearly identical front facades but differ greatly from one another. They vary in width from two to three naves and in depth, with some homes having a beveled jump in the rear façade. Both houses at the ends of the hook project forward and form a distinct termination of the ensemble. The larger of the two end houses houses a dental office. The infill of the bays differs for each house but the overall design is more or less the same: entrance, toilet and kitchen at the front, stairs with loft and skylight in the middle and living room at the rear. This main room is extra high thanks to a two step lowered floor.



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**Park Rozendaal** (1968-71)  
Tussen Torenakerweg, Middenweg,  
Noorderinslagweg en Asschatterweg, Leusden  
**David Zuiderhoek, Henk Klunder, Bouke IJstra,  
W.C.J. Boer**

Park Rozendaal was once called Europarkstad and was designed as a residential district with 1,100 identical "fan houses. It soon became clear that the design of the plans was not financially feasible; only 476 homes were to be realized. The district is composed of large circular segments with identical drive-in row houses three stories high, built in a casting system and with facades of washed concrete elements and aluminum facades. The garage was originally intended for two cars, but multiple options could be chosen in the layout of the floor plans. Four different layouts were possible per floor so that a total of 64 variants were conceivable. This flexibility was due in part to two piping shafts, which allowed multiple locations for bathrooms and kitchens. The most striking feature of these experimental houses is the floor plan: narrower at the front than at the back, creating long fans when connected. The expressive balconies enhance this effect while providing plenty of privacy. The houses string together into short and long circular segments and enclose public spaces in the form of green plazas. In these collective spaces are located shared amenities, such as a swimming pool and tennis court.



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**Montessori School 't Ronde** (1978)  
Uilenhoeve 39, Leusden  
**Jan Verhoeven**

The original floor plan of this elementary school covers two-thirds of a circle. The eight classrooms are located along the outer edge with restrooms, kitchens and storerooms in between. Wide stairs lead to the balcony of the central hall: the "theater. This extra-high hall forms the centerpiece of the school and also serves as the entrance. Despite the round shape of the school, the facades, flat roofs and hoods are composed entirely of straight surfaces. This is the result of the crystalline structure of the structure that is reflected in the many angular twists in the floor plan. Virtually no right-angle connections between walls occur, which is reinforced by the bay windows in the exterior facade. The bay windows are reminiscent of the coronary chapels around a cathedral. Floor plans of cathedrals were an important source of inspiration for Verhoeven. The school is currently being expanded to a design by StudioWA!



23

**Alandsbeek II** (1972)  
Tussen Asschatterweg, Reigerpad, Eiberpad en  
Valleikanaal, Leusden  
**David Zuiderhoek**

In Alandsbeek II, the houses have shifted so much in relation to each other that there are no longer any street walls. Because of the many trees, the neighborhood now has a forest-like character. The partially mirrored houses have an unusual floor plan that Zuiderhoek would later apply regularly. In most houses, the garage and the actual house are an extension of each other, with the entrance between them. The main building and the outbuilding are combined under one large roof. By accommodating an occasional garage in the main building, varied building volumes have been created in the subdivision. These are grouped into almost identical clusters of a total of thirteen dwellings, the so-called "residential units. The entire district consists of 37 of these units, which, thanks to their angled positions and small shifts, have produced an informal subdivision. Different housing types occur within each housing unit. For example, there are homes with two to six residential units, allowing singles, two-person households and families to live together.