MASTER

Moderna OdNova
renewal of behind the iron gate housing estate

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Moderna OdNova
Renewal of Behind the Iron Gate housing estate
M4 Graduation Project
Moderna OdNova-
Renewal of Behind The Iron Gate housing estate,
Warsaw, Poland

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Warsaw and its architecture have gone through a history of powerful systems and transitions. First of all, the total destruction of the totalitarian 3rd Nazi Reich, after which came totalitarian communism with its megalomaniac planning. After the fall of the Iron Curtain, Poland goes through economical, social and political transition, when again its social and visual landscape must endure another powerful system: capitalism and the monetary system. In the daily battle of survival, where money is seen as the driving force, traditional values and identities, so weakened by communism and WWII, must be reinvented and adjusted to the new situation. Modernist architecture, especially in Warsaw, where it defines the architectural identity of the city, must face the same struggle as the whole society. An extra difficulty for modernism in Poland is its wrong image and outdatedness.

In this thesis I would like to define the exact problems of modernist architecture, especially ‘70s housing estates built during communism. My case study will be ‘Behind the Iron Gate’ housing estate in Warsaw. I would like to place it in the general context of modernism and its problems in other countries, with my main reference point being Kassel (Documenta city), about which in the previous architectural studio research was carried out together with other students.

I will analyze and present the specific historical, social and economical context of Poland and Warsaw.

After analysis the problems and context of Behind the Iron Gate, I will try to propose a design strategy that may solve problems of the area. My aim is to preserve the area, change the image and redefine its place in a new, democratic context. By preserving, I mean providing a sustainable future, so the area and the ‘block’ architecture may serve its residents and the rest of the city for long time. Next to economical and social aspects, environmental issues play an important role.

The choice of this thesis is deeply rooted in my background. First of all, almost 23 years of my life, I have spent living in a similar area to Behind the Iron Gate, the much larger but more peripherally located Brodno housing estate. Secondly, the first years of my architectural education have been influenced by the Warsaw School of Architecture, at Warsaw University of Technology. This school is responsible for forming and establishing the Modern Movement in Poland, as well as rebuilding the city after WWII. The third reason is my personal observation on processes and decay of modern architecture in Warsaw. The general image and problems of modernism, which is seen as failure, plays an important role in my decision. It is confusing for me to accept the situation in which large parts of the physical world we live in (houses, offices, schools, hospitals, all made in spirit of modernism) is more or less considered a failure.

My personal sentiment doesn’t allow me to stand idle to let capitalism once again destroy the identity of my city. Studying in The Netherlands, at Eindhoven Technical University, creates a chance for me to use the help and knowledge of its prominent staff. I would like my work, together with their help, to serve as a contribution to the architectural world and especially for my home city that had enormous influence on making me who I am right now.

1.01 Behind the Iron Gate housing estate, Warsaw, photography taken in ‘80s
2 Modernism

New identity, failure, and polish context
2.1 | Moderna

_Moderna_ – Modernist architecture in Polish architectural jargon
_Odnova_ – Renewal or Once again, variation on Polish: _Odnowa_

**Modernism**

By definition, modernism means a deviation from historical, traditional and classical notions, in search of new forms and methods. In architecture that is characterized in the use of new materials, such as glass, steel and concrete in strictly functional arrangements.

**Functional city**

CIAM (The Congrès internationaux d’architecture moderne- International Congresses of Modern Architecture) which was an organization, founded in 1928 and disbanded in 1959, had a profound influence on and contribution to modernist architecture. The organization was responsible for a series of events and congresses arranged all over the world by the most prominent architects of the time (like Le Corbusier, or polish architect Szymon Syrkus), with the goal of spreading the principles of the Modern Movement focusing on all the main domains of architecture (such as landscape, urban planning, industrial design, and many others). CIAM was not only engaged in formalizing the architectural principles of the Modern Movement, but also saw architecture as an economic and political tool that could be used to improve the world through the design of buildings and through urban planning.

The group discussed on principles of “The Functional City”, which broadened CIAM’s scope from architecture into urban planning. Based on an analysis of thirty-three cities, CIAM proposed that the social problems faced by cities could be resolved by strict functional segregation, and the distribution of the population into tall apartment blocks. Wide spaces between blocks would provide enough sunlight to apartments, allowing ventilation of cities, bringing fresh air. Wide intervals would be green, providing attractive and comfortable conditions for leisure. An important role in “The Functional City” was played by individual transportation, in which the car was not an object but a system. The functionally separated city was connected by a network of speed way. The principles published in 1933 as the “Athens Chapter”, were an answer for problems of European cities according to CIAM, which before WWII struggled with problems such as: high density, polluted air and water (close distance of industry to houses), transportation, lack of green etc.

The city planning ideas were adopted in the rebuilding of Europe following World War II, although by then some CIAM members (like Alison and Peter Smithson) had their doubts. When implemented in the postwar period, many of these ideas were compromised by tight financial constraints, poor understanding of the concepts, or popular resistance.

The CIAM organization disbanded the views of the members in 1959. Ideas of CIAM had enormous influence on shaping post-war world and cities. Those ideas helped in accommodating development of industry and population (in the second half of 20th century world population doubled). In countries like Poland and Germany, heavily damaged by WWII, CIAM and modernism helped societies to rise from ruins. Moreover, modernism was not only an addition to existing identities of those countries, but brought almost completely new and reversed architectural identities.
The beauty of the romantic city of Kassel had big influence on the Grimm’s Brothers; due to half timber houses, baroque parks, with Wilhemshöhe and Karslaue, where Schöne Aussicht is located, at one of the most beautiful streets in pre war Europe. With its narrow streets, roman and gothic churches, it’s a city of one millennium of history, art and culture.

However, in the evening of October 22nd 1943, British bombers dropped about 1,800 tons of high explosives on the city, completely annihilating 60 % of the built environment there. The massive destruction wiped out the identity of romantic Kassel. In the years after the bombing the conservative middle classes felt that they had lost all that had made Kassel beautiful in its millennium long history and according to art critic Karl Kaltwasser, the bombing had destroyed mainly that, which embodied Kassel’s identity. The same sentiment is very well expressed by Walter Kramm in his book ‘Kassel, Wilhemshöhe, Wilhelmstal’: “There was precious little of beautiful Old Kassel left by the end of the war; (…) we have to face up with that regrettable fact.”

With the city centre being leveled and dismantled in the years after WWII, Kassel authorities had called it an “opportunity” for rebuilding the former capital of Hessen. “The extent of the destruction offered a ‘unique opportunity’ to create a ‘new and healthy organism, extensively re-organized’, are the words of town planner Erich Heinicke expressed in a speech during the public exhibition ‘Kassel baut auf!’ (Kassel is rebuilding!) in 1946. The exhibition presented a pretentious new plan that aimed to reinvent the city morphology. That plan was never realized due to lack of support by the people of Kassel. However, in the years that followed new plans were presented that matched the people’s interests. Placing a new modernist layer on top of the old traditional fabric.

Travelling through the city centre of Kassel, modernist office and housing towers catch the eye of the visitor. On every crossroad these modernist buildings were built as cornerstones of the urban blocks. The contours of these closed urban blocks were designed as a reconstruction profile by town planner Erich Heinicke after the fatal bombing of Kassel in 1943. His plan emerged during the war but was taken for execution only after. In 1949 Wolfgang Bangert (a member of CIAM) was appointed as the new town planner of Kassel. Bangert proposed to use the contours of the towers as punctual exceptions within the plan. At the same time he widened some of the traffic roads to the 28 meter CIAM-standard. The reconstruction of the city centre of Kassel took a long time and the master plan of Bangert and Hasper was executed in parts.

With the construction of the new ring road in 1953 around the center of Kassel, a major part of Altstadt’s former urban fabric was permanently lost. The old housing blocks had to make place for an oversized four-lane road with an additional lane for the tram. The vision of the future then included the automobile as the main means of transportation and central Kassel had to be easily accessible. The plan for Kassel was very much car user oriented, even the towers, built in the centre, have an orientation purpose for drivers. The plan of Wolfgang Bangert and Werner Hasper is based on the idea of the center as a ‘pure shopping center’, where people would go to for that purpose only.

The plan is met with a lot of criticism from the middle class of Kassel, complaining the scale of the ring is too big and inhuman.
2.3 | Warsaw

Architectural identity and history

The architectural identity of Warsaw represents the complexity of its development. Since 1596 when King Zygmunt III Waza moved the Royal Court to Warsaw, it changed from small Hanza town into a city of baroque palaces and parks. Along the route from the old castle at the Old Town to the newly built King’s residence on the south, the richest nobles have built their palaces (to be close to the Royal Court) with large parks behind the palaces. Often, such complexes were larger than the King’s residence. The biggest park-palace complex was Saxon Palace with Saxon Garden, which later was bought by the King.

The park-character of Warsaw remained till the 19th century when the city was rapidly growing due to industrialization and construction of railroads (Vienna-Warsaw, 1848). The population grew from 60,000 in the year 1800, to 1,000,000 in 1925. The city was characterized by a strict grid of streets with densely built apartment blocks with central courtyards, which are typical for Warsaw or Berlin, around remains of baroque gardens (later converted into public parks).

The growing population made that Warsaw, like other big cities in Europe, had to face hygiene and sanitary problems. The most populated part was the Jewish part of the city, in which for instance in Muranow, almost 200,000 inhabitants per square kilometer was reached, because of dangerous wooden additions inside courtyards. In the years before WWII, Szymon Syrkus and Jan Chmielewski prepared a reorganization plan for Warsaw,
2.3 | Warsaw

“Warszawa funkcjonalna”, according to principles of the Athens Chapter.
The Destruction of Warsaw during WWII completely wiped out the previous architectural character of Warsaw, which now can be only seen on old photographs and post cards. The destruction also gave an opportunity to put Syrkus’ and Chmielewski’s plan in practice. After rebuilding most of the nationally important sites (Old and New Town, Royal Route with its palaces) and after introducing Social Realism (see chapter 2.5), the time for the Modern Movement had arrived.

The most important projects (partially or fully realized) include: Easter Wall (new eastern façade of central part of Marszalkowska Street, project from Marek Leykman), Western Wall with John Paul the 2nd Avenue (wide, partially suspended city road) and the new Central Station. The biggest housing projects are Behind the Iron Gate, Brodno, Bemowo, Goclaw. The city centre was rebuilt with a lot of spaces between building, where a lot of trees were planted, which in combination with the baroque parks and wild river, makes the city very spacious and green and with low density quite unlike cities like Barcelona, Paris or Prague.
Green Capital

Warsaw is a green city as a result of the many remaining parks and gardens of (former) palaces, combined with the natural geographical setting of Vistula River and the post-war functionalist ideas that implemented green spaces as a setting to put the modernist blocks in. The green identity of Warsaw is recognized as a major feature for its residents and for tourism as follows from the following quote from the Warsaw Tourist Office:

“Warsaw is a green city. Almost ¼ of its area is comprised of fields, parks, green squares and lush gardens, making Warsaw a European metropolis that truly offers its visitors a breath of fresh air. Some of the city’s parks are historical, and many house former royal residences and saxonian gardens: in these respects, Łazienki and Wilanów parks, Saski Garden, the roof of the University library and various hidden green gems around the Pole Mokotowskie area are all examples of modern gardens with a historic feel, making them favourite places of relaxation, for both Warsaw residents and visitors.

Additionally, the city boasts two botanical gardens, which are perfect sanctuaries. Warsaw is also one of those rare cities that can proudly say that its green, wooded boundaries are actually growing outwards! The massive Kampinoski National Park is recognized to be and protected as a UNESCO World Biosphere Reservation.

Warsaw is a thriving urban centre, but it is also a sanctuary for many sorts of wildlife, with birds making up the largest group of animals. Though they mostly find shelter and safety near the green banks of the Vistula (Wisła) river, they can also be found perched high above the city, watching the life and bustle from the truly ‘bird’s-eye-view’ offered from the top of the Palace of Culture and Science.”
Modern Movement with the guiding principles of “The Functional City”, even though its best intention, never completely fulfilled the expectations; moreover, it may be seen as a failure.

Functionally designed residential areas, especially if located in city centers, even though their good living conditions (space, light, green, facilities), became problematic areas very soon after completion, characterized by poverty, criminality, segregation and aesthetical decay.

Often, such areas became inhabited (top to down decision) by the already more problematic part of society, which in combination with high density and a lack of emotional attachment to the new architecture became a recipe for troubles. Soon middle class moved away to more desirable types of accommodation (house with garden), leaving behind the poorer and less resourceful. Areas became less and less popular. Value of properties decreased, which attracted the poorer. That escalated the decay of modernist housing estates. In many cases the problem became so big that the only solution was demolition. Iconic for this failure is for instance Bijlmermeer (Amsterdam, The Netherlands) and Pruitt–Igoe (St. Louis, USA).

In Bijlmermeer, most high rise buildings have been demolished after 1992 and replaced with low rise buildings, for middle and high-income groups, in order to change the social structure of the neighborhood. Also the “excess” of public space has been reduced, to increase social control and increase the feeling of safety.

The St. Louis project had less luck than Bijlmermeer. After the total demolition of Pruitt–Igoe in 1972, the site is partially used for the Gateway Middle School and the Gateway Elementary School. Trees are planted on the rest of the site. Postmodern architectural historian Charles Jencks called its destruction “the day Modern architecture died”.

2.06 Demolition of Pruitt–Igoe, St. Louis, U.S.. Death of modernism
2.5 | Modernism vs. Communism

Communism equals Modernism

In Poland, the modernist architecture (especially from the ‘70s), is still strongly associated with the communist regime. This has its roots in the early years after the war and rebuilding the country.

Poland had a special privilege in the Eastern Block to be able to rebuild some of their most important historical sites after the destruction of WWII. The reason was the fact that polish cities were the most destroyed from all countries outside of Soviet Union (Kaliningrad, former Konigsberg was destroyed even more but was part of the Union). The new communist government, with its ‘Big Brother’ in Moscow, had to anyhow please the Poles, by giving them something. In Poland the field of compensation was for instance the strong Catholicism. That’s why not only castles or palaces were rebuilt but also churches.

Architecture played a very important role in the establishment of the new political system, which was not necessarily wanted by Polish or other nations of Central and East Europe. The tool introduced by communists was the architecture of Social Realism: socialist in content and national in form. It was a way to sell ideas of communism in a way that those nations may recognize it as its own. The national form was always from the past, from the period of glory of a nation. But attempts to create such hybrid style ended with caricaturesque results. In Warsaw the best example is Palace of Culture and Science, a 230m socialist high rise and brother of 7 Sisters in Moscow. The place tries to refer to Polish Renaissance in a very awkward way. For Polish people this type of architecture is strongly linked to losing sovereignty.

Art and architecture of Socialism was one of the priority tools of Joseph Stalin. Modernist architecture or International Style was strictly prohibited - identified by Stalin as bourgeois and lacking in “National Form”. After Stalin’s death, an event called Polish October (Gomulka’s thaw or Polish thaw) took place in Poland in 1956. The revolution weakened hard-line Stalinist faction. Big changes came for political and social life but also in the field of architecture. Whereas modernist architecture before was prohibited, it now came into favors, and Social Realism was basically abolished.

The new situation was very comfortable for most architects who were strongly connected to modernism before war. Moreover prefabricated big modernist blocks were suiting fighting the problems of dwellings in severely demolished Poland. Fast, easy and cheap, spacious, green, with lots of sunlight; that was the new vision to accommodate millions of Polish.

The time of the large scale real estate projects was especially in ‘60s and ‘70s, when around of cities many districts were built. But not only around; often the projects were projected in the city centre to fill up the big gaps (scars) from the war.
2.5 | Modernism vs. Communism

Superficial idyll

Modernism, in a way, was working perfect in communism. Everybody lived in similar size apartment, in the same looking block, all children playing together at front of their block, mothers doing groceries in a pavilion or kiosk nearby their block, fathers working in an office or a factory. All people moved into blocks at the same time, always young couples. The social network was cultivated for many years because nobody was moving out. Young couples got to know each other, during birthday or name day parties, families and neighbors were invited too. Later all of them got children; the children always playing together in the sandbox, while the mothers were gossiping. Everybody knew everybody. An image exactly how the founding fathers of CIAM and modernism had always envisioned.

But the application of modernism and CIAM ideas in communist countries, although seemingly successful, encountered different problems than in Western World. In communist countries application of those ideas was easier but the whole project faced problems which capitalism could solve: MONEY. In communist countries there wasn’t a free market that could support financially and pay for new development. Many big projects, like housing, infrastructure or industry were built with money borrowed from the West. In ’70s the economical situation was becoming worst; the reason was ineffective central planning economy. The next problem was lack of technology.

Ineffective economy resulted in bad quality of materials and finishing. Besides, the materials were often stolen by workers. The high speed of construction that the government required, lead to the result that workers were not trained long enough. Blocks or roads were constructed fast, with wrong materials and in a wrong way.

Often the size of apartments was compromised, to save time and materials and get the most of effect with least effort. Projects from late ‘60s, ‘70s and ‘80’s, were densified and simply unfinished. There was no money left for good quality public spaces, infrastructure and facilities like shops, service points and parking spaces, even though people didn’t own as many cars as in the West.

The economical crisis of central planned economy did not touch only architecture but also standards of living. People could not get the products from the west (like coca-cola or Levis jeans), but it was even getting harder to get basic products like meat, cleaning products or cars. The peak of the crisis was in the ’80s, when every available product became rationed, which still didn’t guaranty availability. Shop shelves were empty. A common joke claims that shops in ‘80s were selling just the air.
Wind of change

Social relations in the blocks were destroyed, people became anonymous, new residents didn’t care that much about public or collective spaces as before. Many of them treat blocks as a temporary stop, before climbing up on the social and economical ladder.

Developers versus government

Transformation brought democracy and new models of management which not always go well together with the mentality of people, especially those who were used to the previous ineffective system. Management on national or municipal level doesn’t follow social and economical processes and trends with the same speed. Slow and ineffective legislation affects spacious and visual aspects of life the most (because infrastructure, tax reforms and EU have higher priority than a beautiful surrounding). Space and architecture are left at the mercy of the free market and developers, whose first and (often) only goal is fast and easy money. Apart of slow legislation, in 2003, all master plans made before 1995 were canceled (before that year, every piece of ground in Poland had a master plan, similarly like in the Netherlands). The reason was a new law that manages the reclamation of grounds taken away from people by the communist government after WWII. In the case of Warsaw, 90% of the city suddenly didn’t have a master plan. To not limit new development by that, developers can apply for conditional permission according to which they can build. But such conditions only have demands about maximum heights and function, but they have no policy for looking at the urban context of the area or city. That resulted in wild development of suburbs, where are neither facilities, nor infrastructure; instead gated communities, as closed islands of rich. An example of such is Marina Housing Estate, a luxury gated community, built in a green aeration wedge. Another example includes office towers, in the post-industrial western part of the city centre of Warsaw (west edge of Behind the Iron Gate). In almost all cases new development didn’t help to solve the problems of the existing areas. Often, they made problems worst.

Problems with blocks

Many people wanted to change the place of living, after buying their first car (second hand VW Golf, Opel or Audi imported from Germany). People didn’t want to live in a small and grey apartment, in a concrete block any longer. Especially for those blocks were associated with creepiness of communism. Even though the blocks are modernist, people call them “soc-real” (Social Realistic). Hence, in the ’90s the blocks faced a big image problem. As mentioned, cars are part of the problem. Blocks housing estates were not designed to accommodate the amount of cars like in West Europe. Another problem is the lack of facilities.

Many original residents, who lived there since the beginning moved away, new people moved in.

2.6 | Modernism vs. Capitalism

Wind of change

Social movements like Solidarnosc, protests in ’80s and finally the Polish Round Table Agreement brought the end of Communism in Poland, soon followed by rest of central-east Europe. Since 1989 the country, economy and society entered a difficult time of transition from central planned totalitarianism towards a free market democracy. People suddenly got access to all goods they always wanted; the only thing they had to do for it is work. Possessing money meant an end of poverty and creepiness in the early ’90s, formerly common for living in People’s Republic of Poland (PRL). No more grey and sad clothes, no more grey soap, no more crappy bus that never arrives, no more rations for sugar or meat, no more empty shop shelves. Instead: jeans, McDonald’s, German cars, huge shopping malls with a larger choice than in the West (international brands experimented, to find out which brands would become popular). The change also came into architecture, design and general taste of people.

Fast growing economy and changes not always happen everywhere and for everyone equally. Since the transformation, the difference between more and rich is growing. Society splits for two parts, each with a different speed.

Problems with blocks

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Many original residents, who lived there since the beginning moved away, new people moved in.

2.09 Demolition in 2012 of Mer­­cure Hotel (intersection of Grzy­bowska Street and John Pauld 2nd Avenue). Hotel built in ’90s had to make space for 155m tall new tower.
2.6 | Modernism vs. Capitalism

Loosing heritage

The problematic image of modernist development and lack of vision for cities step by step destroys the post-war architectural heritage. Architecture from that period gets very fast outdated, looking “ugly”, and old fashioned, communist. Society doesn’t protest when pearls of modernism or just good modern architecture is demolished, to give space for new, “modern” (postmodern and caricatural) architecture. Objects or urban complexes which defined modernity after WWII disappear from cityscape, like in the case of SuperSam in Warsaw or Behind the Iron Gate housing estate. In cities like Krakow, which was not destroyed and kept its identity, this is not big problem. In case of Warsaw, destroying modernist architecture and urban planning, takes away the architectural identity; once again. This time the city is not destroyed by bombs of Nazis, but by developers, city officials and unresponsive public opinion.

Scenarios for future of ‘70s residential areas

In recent years urban planners and sociologists propose 3 scenarios for ‘70s residential areas in Poland. The first one considers upgrading public spaces with new parking, green and facilities, in addition to enlarging apartments (like what happened in East Germany). This scenario has a small chance for success due to the scale of the problem, lack of money (which may be resolved in near future by the EU Structural Funds for Regional Development) and especially because of slow and ineffective planning and legislation. The second option proposes moving residents and demolition of such areas and buildings. That would face problems such as convincing private owners of dwellings, due to strict private ownership legislation in Poland. This solution works in countries with effective anti-NIMBY legislation (like the Netherlands - Bijlmermeer in Amsterdam). The last option, the most likely to happen, is just leaving the problem as it is and letting it “solve” by itself – effectively wait until the blocks fall apart (Polish approach).
2.6 | Polish case - Paradox

Paradoxally, the problems of residential areas from ‘70s are in a way their salvation. We must keep in mind the sheer scale of the problem. In Poland, 62% of the 38 million people live in urban areas. Between 40 and 50% of urban population lives in blocks constructed between 1945 and 1989. But very interesting is the social structure of blocks. In communist time everybody, like teachers, doctors, officials and workers, lived there. Even though many people moved away from blocks to new development, blocks still show a cross section of society. Those areas are not boring suburbs, with high criminality and pathology, like in other western big metropolitan areas. Moreover Poland faces a big shortage of housing, having one of the lowest surfaces of dwellings per resident in EU. There is still big migration of people from rural areas into cities. Warsaw metropolitan area for instance, grew from 2, 4 million residents in early ‘90s up to over 3 millions in 2010. The blocks in big cities will be inhabited for at least two more decades. Also dwellings in such areas are more affordable, especially for migrating population from smaller cities and rural areas.

But the price is not the only criterion why people chose it. New development is built often on non-urbanized areas, far from city centre, which before were rural and now enclosed in city borders. Such areas, like Bialoleka, in the northern part of Warsaw, have no basic infrastructure. There are no roads, public transport, water, sewage (the cost of that infrastructure is added to the price of the dwelling). There are also no school, kindergartens, parks and shops. Many people realized that it’s a better choice to buy an apartment in ‘70 or ‘80s blocks (despite the bad image), because it’s closer to their work and has better facilities, and of course it’s cheaper. In recent years that trend becomes apparent in the real estate market, as old apartments often cost more per square meter than newer apartments on the second hand market.

Recently, this also slowly changes the general approach to such areas, especially among people who were born and raised there. People, when asked what they think about their blocks district, in the beginning feel a bit shame, but eventually they give the impression they are proud of their place of living. A few years ago a series of guide books on Warsaw block districts was released.

The positive social trends that happen in such areas of course have more effect when they are accompanied by physical and social initiatives (such as upgrading public and collective space). Brodno district in Warsaw serves as an example, where the Polish artist and former resident Pawel Althamer (known for instance from Documenta in Kassel) is very actively involved in improving the area.

The specific context of the ‘70s and ‘80s areas in Poland creates a chance, not to be wiped out from the city landscape and replaced by something new.
3 Behind the Iron Gate
History, ideas, problems and chances
The residential district, constructed between 1965 and 1972, about 54 ha in size, is located in Warsaw. About 26,000 residents live in the area. The area is located less than 1km away from the heart of the city, between Marszalkowska Street (the main north-south axis), Zelazna Street and Chlodna Street. Behind Marszalkowska Street, Saxon Garden is located (the oldest park complex). The main roads crossing the area are: Grzybowska Street and John Paul the 2nd Avenue, which nowadays is the financial hotspot of Poland.
3.2 | History till 1945

Before 1939

The area borders with Saxon Garden on the east side, a 17th century complex belonging to the former Saxon Palace (nowadays the ruins of the palace hold the Grave of the Unknown Soldier). The name of the district has derived from the former gate to the garden. Before WWII, the garden had been fenced; and only the western entrance had a decorative iron gate. The gate was one of the elements on the Saxon Axis, which starts at today’s Pilsudski Square, continuing via the Saxon Palace towards Saxon Garden. In the district Behind the Iron Gate, a square called Square of Iron Gate, had been located in front of the gate.

The history of the district starts in 1693, when the area was still outside the city walls, and when Dutch architect Tillman van Gameren designed here one of the first private extensions of Warsaw, Jurydyka Wielopole (Jurydyka - a settlement next to or within the royal city, with autonomous rights). The project consisted of a row housing estate, surrounding a central square, being home for the workers. The square, which later was renamed to Behind the Iron Gate Square, together with nearest streets became the location of the biggest market place at the time in Warsaw. In 1759 the first coffee place in Warsaw was opened here. In 1730 plans of a further expansion of Jurydyka had been canceled, because of the construction of Barracks of the Royal Horse Guard of King August the 2nd. The barracks were built along Saxon Axis.

In the 19th century, Warsaw entered a time of rapid population growth. Because of high demand for housing and workshops, the area became densified with 4 to 5 stories high courtyard blocks, typical for Warsaw and Berlin. Until at the end of the 19th century the area lost its rural character. From 1899 till 1902, Halle Mirowskie, the largest market halls in Poland were built, taking the place of the Royal Horse Guard Barracks, which continued the market traditions of the area and which made the area the most vivid place of the city.

The area became very popular among the Jewish minority, resulting in the many Synagogues and houses of prayer, which were built. Until 1939, most of 460.000 Warsovian Jewish lived in the area. The Jewish community remained and enhanced the trading character of the district throughout the late 19th century.
3.2 | History till 1945

3.04 Saxon Axis in 1939
with Hale Mirowskie, Wielopole, Lubomiski Palace, Iron Gate Square, the Iron Gate and Pilsudski Palace
3.3 | History till 1945

World War II

The vivid, multicultural, urban life of the area ended abruptly on the 1st of September 1939, when the city experienced the first wave of Nazi bombings. On April 1st of 1940, the wall around the Jewish part of the city was being built and on October 1st 1940, the Nazis had organized the official Jewish Ghetto inside the walls. The Ghetto occupied a large part of Warsaw, mostly in the western part. To allow the flow of troops from west to east, the Ghetto was divided into a Small and a Big Ghetto (Halle Mirowskie and Chlodna Street, playing an important role in transit remained in the Polish part of the city). In order to connect both parts of the Ghetto, a wooden bridge above Chlodna Street was built, which became one of the most known symbols of the Warsaw Ghetto. In 1942 the southern, smaller Ghetto was completely destroyed, and 80% of the Jewish (300,000 persons) were brought to the concentration camp in Treblinka. The rest of the Ghetto (the Big Ghetto), was demolished after the failure of the Jewish Uprising in April 1943. After also the Warsaw Uprising in August 1944 failed, most of the buildings in the Polish part of the city (the area that remained in Behind of Iron Gate) were demolished.

After 1945 only a few buildings were standing amongst the ruins of all the other buildings; most of them around Grzybowski Square (the Catholic Church of All Saints and Nozyki Synagogue - the only one left in Warsaw), the ruins of Halle Mirowskie and Lubomirski Palace (next to Iron Gate Square).

The baroque Saxon Garden, by then, had lost all of its trees, cut down by people to survive the cold winters during the war. The lower part of the grand colonnade of the Saxon Palace, which before connected two wings of the complex, was the only element of the palace remaining.
While the Old Town with Royal Route (east from the area) was reconstructed and the residential district north from the area rebuild in social realism style, the area of the present Behind the Iron Gate remained a vast open space in the middle of city centre, like a gaping wound.

The only buildings rebuilt were the Halle Mirowskie and Lubomirski Palace (which was also turned 72 degrees, so its front would be exactly on the Saxon Axis, facing the Saxon Gardens).

After years of emptiness in the middle of city, the transformation of the former Ghetto came in 1961, when a competition for new housing estate for 28,000 residents (24,000 in new built objects) with facilities, was organized. A team of young architects (Jerzy Czyz, Jan Furman and Andrzej Skopinski), was selected as the winner.

According to their plans, 19 residential high rise buildings (of 16 floors each) and 5 lower apartment blocks (5 floors each), with a total volume of 1.5 million m³, were about to be build. The architects also planned the construction of 13 pavilions with shops and services (180,000 m³ of volume), 3 schools, 4 kindergartens, 1 crèche and 2 health care centers. The new housing estate had the size of a small city and was the largest project in the city centre.
3.3 | History 1945-1989

Blocks

Between 1965 and 1972, the 19 blocks were constructed. Each of them has 15 stories (not included ground floor). The blocks are 86m long, 16m deep and 52m high (included technical floor) on ground floor, where unlike other districts, commercial spaces were planned, such as shops, post office, banks, etc. Very untypical is also the fact that the buildings had entrances from two sides on the ground floor. In the 15 floors above, 420 apartments (210 apartments 27m2 and 210 39m2) or 300 apartments (240 x 48m2 and 60 x 57 m2) have been constructed, depending on the block. The blocks have been constructed in monolithic concrete, instead of big plates, which is common in ‘60s and ‘70s.

The façade was given a very simple and geometrical character, a sequence of small and big windows (French balconies) and rectangular plates. The ground floor got a glass façade all around. The façade is divided for two parts by the vertical routing, which in contrast to the windows was filled up on the whole height of block with glass bricks (luksfer), bringing a lot of broken and soft light to the elevator hallways and staircases.

The blocks were considered “luxury” at the time of construction; they had French balconies with high windows/doors and wooden parquet instead of vinyl floor covering. Collective spaces next to the entrance on the ground floor were supposed to be used as waiting room for elevators and space for social interactions. Another “luxury” factor was a sort of kiosk with genitor next to the entrances, were residents could buy newspaper etc., without necessity of leaving the block. The blocks became very popular even before they were built, due to the image that spread around and in the early stage actors, movie directors and many other celebrities, were among the first residents. The price that people had to pay for the apartments was high; Behind the Iron Gate was the most expensive development of the entire country at that moment.

A long corridor runs through the entire length of the blocks on each floor, with apartments on two sides. So, the apartments have windows on one side only, what makes ventilation more difficult. The blocks always had to be oriented in a north-south orientation, to get some sun in each apartment once per day (east on mornings, west on afternoons).
3.3 | History 1945-1989

Problems by then

The “luxury" image of the apartments and blocks of Behind the Iron Gate faded away very soon after construction. The main complaint by then especially was the too small size of the apartments; the smallest is a studio of 27m². Those also don’t have proper kitchen, a cooking arrangement is in the entrance hall. Only the ‘large’ apartments of 57m² have a kitchen with windows. Celebrities living there were the first people who moved away.

The small apartment sizes were the result of high pressure on the architects to fit more apartments in the blocks. Rumors say that Gomulka, leader of the communist party, personally supervised the design of the blocks in an attempt to tone down the “luxury” of the blocks. He proposed that apartments shouldn’t have bathrooms and kitchens (instead collective facilities on the corridor).

The pressure of lowering the cost also resulted in building more blocks than originally planned (the district was planned for 14.000 residents; in the end 28.000 people lived here). Also many facilities like shops were not realized because of lack of money.
Disconnected Axis

The destruction of Warsaw allowed input of ideas of CIAM during the rebuilding. Small and narrow streets were replaced by big avenues and streets. This also happened to Marszalkowska Street. The profile of the street changed, from 2 lanes with incorporated tramlines, into a street with 3 lanes in each direction plus separate tram lines. Unfortunately, this is exactly where before The Iron Gate and the Saxon Garden ended; designers of the new street didn’t plan any crossing, creating a barrier on the former axis. Before people could walk from the garden to Hale Mirowskie, but now crossing is impossible. One can cross illegally by jumping over the fence (tram line barrier) or go all the way around via Grzybowska Street or Bankowy Square.
The district Behind the Iron Gate is an extreme example of economical and social transformation of ‘70s housing estate in Poland. The area is exposed to extreme capitalist trends and process, because it is located in the city centre and this in combination with slow governmental planning, leads to the specific situation.

**New development**

The ground price is very high what makes it attractive for new development. The spaces between the blocks on the street side, especially along Grzybowska Street and John Paul the 2nd Avenue (which is becoming the financial centre of Poland, in a City of London style), is especially vulnerable for these developments. In early ‘90s new development wasn’t taller than 10-15 stories high, still lower than the blocks of Behind the Iron Gate. But recently, developers build taller objects, up to 150m tall (Cosmopolitan Tower). The strange and unsustainable approach of developers goes even further. Often new developments aren’t only at the streets but also extrude inside the city block, like the projected tower of Jewish Community (also 150m tall), next to the Synagogue, a school field. The objects built in ‘90s, which aren’t “tall enough” are being demolished and replaced by taller objects, like in the case of recently demolished Mercury Hotel (crossing of Grzybowska Street and John Paul the 2nd Ave.), in order to build 150m tall high rise. There are also plans for demolishing a complex of office buildings on the corner between Grzybowska and Marszalkowska Street by the same company who built it before, only to be replaced by a taller one. It leads to rat race, quite similar to the situation in Manhattan at the beginning of the 20th century.

Where in the beginning of economical and political transition, new development was in the scale of blocks and in relative spatial order (complex of offices between Grzybowska and Marszalkowska Street or demolished Mercury Hotel), newer ideas bring spatial chaos, over-scaling residential buildings, diminishing collective space, casting shadows on blocks and space and increasing the already high traffic.
3.4 | Present time

Parking

The parking which existed before 1989 was relatively enough for the small amount of cars residents owned. Together with growing wealth, the amount of cars in the area grew accordingly. New developments provide enough parking for own usage, but they don’t incorporated the needs of existing residents. The concept of shared (commercial/residential) parking basically doesn’t exist in Warsaw, or in Poland. There aren’t policies from the city limiting parking on sidewalks or streets, which doesn’t stimulate development of different parking concepts, like the sooner named shared parking or parking garages built in private-public cooperation. Instead, public space (which previously was a play ground or green at front of a block) is transformed into parking. But such parking lots are reserved for the adjacent residents and can’t be used by visitors of the area. Moreover, parking areas are fenced, which increases spatial disorder and makes accessibility of the area more difficult. As a result of the growing amount of cars, the public shrinks and parking surface occupies 21% of the unbuilt surface in 2012 and still is not sufficient.

Social aspects

Since 1989 many original residents from the blocks left the place, but they still keep their apartments and rent them to young people in particular, among whom the apartments are very popular, because of the price and location. People don’t stay there as long as in other places; they move very fast, making social relations not that strong as elsewhere. Residents remain more anonymous. That trend is enhanced by the fact of the high amount of dwellings per block.

Besides of young people who used the area as the first place in their career in Warsaw, the area becomes increasingly popular among Jewish people who started to move to Warsaw again from Israel. Since a few years a renaissance of Jewish culture can be observed in Poland and in Warsaw especially. In the area, next to Grzybowski Square, a Jewish Theater (one out of two in whole Europe), a Synagogue and a Jewish Community Centre are
located and every year the festival of Jewish Culture, Warszawa Singera, is organized right there. Apart of Jewish in the area a large Vietnamese minority can be observed living there.

Even though the area is one of the most ethically and culturally diverse parts of the city, there isn’t a higher criminality rate than in other parts of the city, and residents, when asked in the survey, didn’t complain or point out that they feel unsafe.

**Green**

Before 1989 the district was mostly covered by green spaces including the central park, next to the Hale Mirowskie, play grounds, green spaces between blocks, etc. New development as well as increasing amount of parking, claim green spaces. Even though quality of green spaces is not very visually attractive and doesn’t have high biodiversity. Trees planted in ‘70s have grown large and dense since, which doesn’t allow sun light to reach the ground surface. That makes the ground very poor of vegetation, often there is naked soil.
3.4 | Present time

Ideas and plans for blocks

Since 1989 there were a few ideas and plans on how to improve living conditions in the district. In early ‘90s an architectural competition was organized, but all plans proposed densification of the area by building more dwellings and facilities.

Some people limited their ideas to interventions in the blocks, like adding real balconies, a direct outdoor space. But the project was abolished due to the costs, which were too high for the private owners of the apartments.

On the beginning of the 21st century, the housing cooperative of Behind the Iron Gate (which manages the collective and public spaces), made studies and a renewal project for the area. The plans incorporated the improvement of infrastructure (green, pavements, street furnishing), providing facilities like a resident club, encouraging bottom-up economical initiatives. In the end, only the elevators were renovated and the façades were insulated from the outside (the typical glass bricks were also removed and filled up with solid wall).

There are also many opinions, stating that the blocks should be demolished. This idea is basically impossible because the apartments are privately owned and Polish are hard to persuade to sell their private property. Besides, legislation to protect private property is strict in Poland. Moreover the blocks are made from reinforced concrete, what makes demolition very expensive.

Field research

In order to understand the needs of residents I have performed research in the area. The research consists from several parts. One of which was a survey in which the residents were asked about what is lacking them, what they think about the proposed program, etc. In another part of research I have taken interviews with 2 former residents, and I have studied numerous recent articles about the area from local newspapers and the documentary about Behind the Iron Gate, made by Austrian artist Heidrun Holzfreind.

From the research I conclude that the residents complain about: lack of parking, lack of balconies / outdoor space, small apartments, too small kitchens, kitchens without windows (making cooking difficult and unpleasant), bad quality of green spaces, lack of playgrounds and sport facilities, long corridors, not knowing other neighbors, lack of cultural facilities. Residents complain also about new development that blocks sunlight and take away the space.

The new functional program that I have created (which will be described in chapter 5.3 and 5.4) is based on the research results and has been cross checked in consultation with one of the former residents.
The location where the architectural intervention will take place, has been selected after long studies. The goal was to choose a site on which the intervention will have the most effect for the whole area and which is the most representative for the problems described before.

For the site of intervention I chose a lot in eastern part of Behind the Iron Gate, in the corner of the crossing of Grzybowska and Marszalkowska Street. The plot still remains (the last) unbuilt plot next to Grzybowska Street in the eastern part of the district), but is located most attractively from an economical point of view. The site stretches between the busy and urban Grzybowska Street towards the calm and green public park at the Iron Gate Square (part of Saxon Axis). The plot is squeezed in between two ’70s blocks and one long 5 stories apartment block from the ’60 and two developments from after 1989.
3.5 | Site of intervention

3.18 Analysis of site - '70s blocks

3.19 Analysis of site - new development

3.20 Analysis of site - parking

3.21 Analysis of side - green
block from '70s

development since 1989

parking

green
4 Green strategy
4.1 | Sustainable and sensitive

My goal in this project has been to design something more than a building, a strategy that can give new life to architecture and urban planning of the '70s. A strategy that can provide a sustainable future for Behind The Iron Gate in Warsaw, a strategy in which needs of residents, economy and ecology are combined in a coherent plan, with the guiding principles of the balance between people, planet, profit.

I would like to combine new development - as the economical carrier for the development of the district -, with solving the problems of Behind the Iron Gate. I am hoping this combination will change the image of the blocks and area, and together with the already positive trends that are happening in Poland ("renaissance" of blocks), Behind the Iron Gate may become an example for other similar areas in Poland or in Europe.

The guiding principles:

1. Preserve unique spaces between buildings
Warsaw’s unique feature is the large amount of green spaces along the river Vistula and in many parks and public spaces of residential districts like Behind the Iron Gate. I would like to enhance that feature of the city and the area and make it part of the identity of the new Warsaw. The reinvented image of a green and spacious city could be used in tourist marketing. Spaces and green will also serve health and well being of residents and citizens of Warsaw.

2. Sustainability and affordability
My goal is to create a strategy and architecture that full fills modern standards of sustainability. Part of the sustainable approach is to propose a strategy that is affordable and realistic from economical, technical and legislative point of view. I don’t intend to put a hold on new development or go against the rules of the free market. My strategy must also fit in to specifics of Polish city managing. The sustainability aspect in my design is enhanced by research from a consultant at DHV-Royal Haskoning.

3. Being sensitive to needs of resident
A large part of my design is focused on needs of the residents, considering their suggestions. In my design research I constantly refer to their needs. I would like that my design is user friendly and creates opportunities to improve their social interactions, building a healthier community. In this field I will use the help from a researcher responsible for human interactions.

4. Respect existing architecture
Warsaw in post-communist time, experienced too much brutal treatment of its architecture, which became victim of developers and municipality. In my strategy I would like to respect architecture of ‘70s block, preserve it as part of architectural history and identity of Warsaw.

5. Reconnect area to the rest of the city
The area is an urban island between parts of the city which where rebuilt in Social-realism style. Also the Saxon Axis is disconnected from the area. In my strategy I would like to functionally connect Behind the Iron Gate to the rest of the city (again).
urbanity - development

green - collective

fusion city
4.2 | Master plan

The main points of my approach and strategy are put into a master plan. The master plan will be guiding for further design, which will be the translation of the master plan for the site of intervention.

• Streets: urban life and economical engine
In my strategy I would like to redefine the meaning of streets. In post war history streets of Warsaw changed their character. From vivid, densely built, with shops and cafes, they became empty, with undefined facades. Currently, streets in city centre of Warsaw are dominated by cars, parked along the street and on sidewalks. In ground floors of buildings are often banks or mobile phone operators.

As first step, I would like to only dedicate spaces along the streets for new development, to define spacious meaning of streets. New development should have mostly commercial purposes like offices, hotels, services and retail. The area is already densely populated; new intensive residential development could cause more problems with parking and lack of facilities.

Second step of redefining the street involves bringing urban life. New commercial development on ground floors must dedicate spaces for shops, restaurants and cafes, which will generate human traffic and urban life not only during hours when blue collar workers are working, or residents are commuting.

• Green collective space - Modernist quality and people and nature
I would unbuild spaces between blocks to remain unbuilt, preserving this feature of modernism. In these unbuilt spaces I would like to provide all the facilities and green spaces necessary for the residents. I would like to redefine public space, to make it more collective, dedicate it for residents. I want to remove commercial / public function from the inside of the area, which will make social control in the space easier, because it will be protected from random visitors, vandalism and criminals.

• Result - New mega block
Combination of densely built streets with commercial and urban life, and green collective spaces between blocks generate a new urban typology: the Mega Block. The typology uses features of both typologies, classical city of streets and modernism - CIAM.

This combination provides a chance for commercial and residential world to coexist next to each and interact with each other. Residents can use facilities of urban life, proper for living in the centre of a European metropolis of 3 million residents and on other hand be protected from all aspects that the big city generate.
residential buildings and collective spaces

accessibility and privacy

urban ground floors

public spaces and connection to city
• **Accessibility and privacy**
Whereas in a typical classical urban block, the inner (court)yards of private or collective space, were not accessible for strangers, in modernism spaces between blocks were fully accessible. In my design I would like to keep the openness of the spaces between blocks but on the other hand make them safe and protected. A way to achieve that is by new development on streets, but which doesn’t create one continuing wall (like in classical city). Already now, new buildings on street are disattached from each other (sun light and fire requirements). I would like to keep the distance between blocks as small as possible, in a way they still serve as passages to the inside of the mega block, to the collective spaces, but small enough to not encourage strangers to enter the area coincidently. Such passages would still enable crossing the area, but makes people who enter or cross the area aware of the fact that now they are in a completely different place: the “world” of the residents.

After entering Behind the Iron Gate from the street, the architecture and landscape design should continue the task of the passages. Small architecture and landscape should have a friendly character but explicitly let a person realize that he or she is a visitor. There can’t be fences or traditional borders inside the area, instead special types of vegetations (hedges), differences of height, lighting, colors and close distance to spaces being in viewing field of residents.

• **Connection to the city**
In previous chapters on my thesis, I mentioned about the disconnected Saxon Axis. In my master I would like to indicate that this axis should be reconnected, which would connect Behind the Iron Gate to the rest of the city, especially to the historical part where the Saxon Garden, Pilsudski Square and Royal Route leading to Old Town are located. Reconnecting the Axis could also make Hale Mirowskie, still the largest market place in Warsaw, more accessible for people who go for a walk in Saxon Garden.

The reconnection should happen there where the Axis crosses Marszalkowska Street. Crossing should allow a safe and comfortable passage for pedestrians and cyclist, over the busy road and tramway. The passage should have the form of a green bridge over the road and tramway, which could be put partially under the ground. A tram stop, which right now is 200m more south from this place (right now at crossing of Marszalkowska and Grzybowska Street), should be moved to the place of the crossing of Axis and road. The street and tramway should be placed in a semi-tunnel. This place would become a small public square, the ending of Saxon Garden.

Suspending the new green passage over Marszalkowska Street would be an indication of the end of Saxon Garden and a reference to the Iron Gate. Standing on the passage gives overview on Saxon Garden and Behind the Iron Gate district with Iron Gate Square and Hale Mirowskie. From Saxon Garden, such way of closing the park / axis, could show that the axis is escaping up into sky, going to infinity.
Everybody intuitively knows about positive effect of green on our well being, green makes us more relaxed; we want to spend free time in green. People also want to have green in their living and working environment. Parks are desirable and we decorate our working and living environment with plants. I would like to go a bit deeper into the influence of green on city and our well being. For that purpose I would like to refer to research of DHV Royal Haskonink.

**Green and health of city**

The importance of green areas in the city is not only in the large urban green areas, like parks and lawns. For example small gardens are also very important. These cool down the city during warm nights. There is a high biodiversity because of different trees, bushes and plants people have in gardens, which attracts a high biodiversity of insects, birds, amphibians and small mammals. Gardens also play an important social role, especially among older people who keep fit, being physical active while cultivating their garden. It’s a place of social relations, leisure and relaxation from busy urban life.

**Green and human well being - research of DHV**

From the research of engineering consultants of DHV-Royal Haskoning, a couple of important facts are scientifically proven. Research has shown that neighborhoods with attractive green, lowers the chances of obesity among children, because it stimulates them to go and play outside. Another research result shows that neighborhoods with more green, lower the amount of people suffering from depression. That has also triggered the researchers to study the relation between green and the working environment. The results show that green working environments increase the physical activity and lower the chance for mental disorders. As a result, companies where the workspaces have a strong visual connection with attractive green, suffer less from sick employees. These are some of the results pointed out by the research. This is important to notice, because it influences my way of thinking about the public space in Behind the Iron Gate. The program of the public space can be and should be beneficial to the well being of both the residents and the employees in the commercial spaces.
5 Architecture
5.1 | Strategy in practice

The master plan (urban concept), mentioned in chapter 4.2 has been translated into the site of intervention. At the street side a tower is located, generating a continuous street facade, fitting to the scale and form of the existing developments alongside the street. In combination with new commercial functions at the plinth of the tower the urban life and density at the street side becomes enhanced. Behind the tower, in between the ’70s blocks, a more intimate space is created to serve the residents. On the ground floor parking space has been programmed, covered with a deck, which will provide green landscaping and all the functions for the residents.

5.01 New development at the street with urban functions on ground floor, such as restaurant and shops. Creating urban street

5.02 Green and collective space, environment for perfect living

5.03 Urban street and quiet, green space for residents behind
urban life and new development at street

green and collective spaces between blocks

tower and green space behind
5.1 | Strategy in practice

5.04 Section A-A, scale 1:400, represents relation between new parking, existing blocks, new development at the street and green / collective space
5.2 | Parking

Parking

Parking a car in Behind the Iron Gate is one of most urgent problems and causes the most spacious disorder. In the plot behind the new tower and between existing blocks I would like to solve the problem of parking. In my studies I considered several variants.

1. Parking underground

This solution is most effective spaciously. Putting all cars underground releases a lot of space for green and collective purposes. The parking spaces could be shared between residents (night) and employees (day). But the problem would be distance: if parking is located under tower, it’s too far; if it is in between blocks, then too far for users of the tower. Moreover this variant is very expensive, time consuming time construction (digging many meters underground) and materials. Subscription for such parking would be too expensive for residents.

2. Multi-layer Parking garage

An above ground parking garage is much easier and faster solution, which would be done in IFD (Industrial, Flexible, Deconstructable) method. But such structure would occupy a big plot or would have to rise very high, which makes it more expensive and causes shading for apartments and an unattractive view.

3. Automatic parking towers

A more advanced version of parking garage is an automatic parking tower. In this solution, driveways, which normally occupy at least 40% of the surface are unnecessary. In a fully automatic tower up to 95% of surface is used for parking. This solution is also very sustainable, because the IFD-principles would be applied and cars don’t produce harmful exhaust gases during entering and exiting. The façade surface could be used for photovoltaic cells that provide electricity for the tower system itself and in the future to charge electrical cars. A fully automatic parking could also be control by applications run on a mobile phone or tablet, which gives big comfort of usage. The high construction costs, have a faster rate of return than other solutions, because of lower costs for energy on operating, security, elevators, etc., and with very high effectiveness.

Disadvantages of this solution are the weak legislation in Warsaw and cooperation between commercial companies (that could build it) and users (city, municipality or housing cooperative). Moreover such towers, to not disturb the apartment blocks (sun condition and fire rules) would have to be place next the street, instead new tower, thus occupying valuable commercial development space.

4. Parking on ground level

The last considered and also chosen variant is parking on ground level. This solution doesn’t require any additional costs of construction, digging, no extra technology for ventilation etc. It’s also very flexible, in future; such parking can easily be removed. This solution already exists now, but only 45% of the available space is dedicated for ground parking and is not efficient with drive ways. My strategy is to reorganize parking and use the maximum surface of the plot as parking. In case when parking will be shared by the tower and apartments blocks, the tower doesn’t need to build additional parking under-or aboveground. This leaves us with the issues concerning public space and collective functions.
underground parking

multi layer garage

automatic parking towers

ground parking
5.3 | Deck

Deck - second level

The proposed strategy may be seen as nothing new or any improved, moreover, using the entire plot for parking, requires cutting most of existing trees, which won’t fit in the new parking grid. Therefore, loss of trees and usage of space (100% of space is parking and routing) will be compensated in my strategy by building a deck above the parking, which will double the usage of space, providing a second level for human activities and space for green / ecology. The deck will be covered with vegetation.

The deck will be supported on a grid of concrete columns (grid 8m x 7,8m) to fit the grid of parking spaces. The deck will be constructed from reinforced concrete, with the use of Bubble Deck system (inflated recycled rubber balls between the upper and lower reinforcement mesh), which saves material and lowers the weight. The top of the deck will be 3,6 m above the ground level. The deck is unattached from the existing ‘70s blocks, by a distance of 1,8m, but the distance between the ‘60s block equals 6m, in order to not shade the ground floor apartments in the ‘60s block. This gap or “canyon” between the deck and ‘60’s block, will be also the main entrance to the area for pedestrians and cyclists, post man, etc. This space will be subjected to social control by the residents living in the ‘60s block. A potential vandal can get the feeling that he is watched from the adjacent apartment windows.

Slopes

The green deck between the blocks, the tower and above the parking will be shaped by slopes in different angles, “terra forming”. The different angles of slopes have different purposes. First of all, close to street the angle of the deck is the most steep (71°), making the wall of the deck more friendly and possible to grow vegetation. Such slope doesn’t give any change to climb or walk on top of the deck. This would be a natural form of stopping vandals.

Deeper inside the area, a different angle of slope will be introduced 31°. This slope allows walking on top of the deck without the need of stairs (not for cyclist, mothers with baby wagons, or the disabled). The angle of 31° also allows the construction of stairs according to polish norms (24cm deep and 18 high). This slope is located next the park / Iron Gate Square (to allow easy access from the park on top of the deck) and next to the ’60s block. Visitors entering the area, following the “canyon” will have to first pass the socially controlled zone before they enter the top of the deck.

Third type of slope, of 23° has a goal to create a comfortable place for people to lay or sit on the edge of the deck. This slope will be located in the north east corner of the deck, overlooking Iron Gate Square and the park continuing next to Hale Mirowskie. This place in summer could also be used as sitting place for an audience during outdoor festivals, movies or theater shows. In the winter this slope can be used by children for skiing or sledging. A slope like that is encouraging children to play outside even when it is cold outside.

The last slope: Ramp in the canyon, parallel to the ’60s block allows easy access to the top of the deck for people with physical disabilities and cyclists.
smooth slopes

accessibility

ramp

sitting
5.14 Passage between the deck and old block, with two different types of slopes and the ramp for disabled users.
5.15 Park side of the deck, with smoothest slopes, which in summer can be used as sitting/laying area, but in winter can be used for sledding and skiing.
5.4 | Tower

New development - envelope

In the southern part of the plot, next to Grzybowska Street, I propose new development. The volume of the new building corresponds with other buildings at the street from after 1989. The tower is 47m tall, the same height as an apartment building west from the plot. The new tower is located with 12m distance from the apartment building. At the other side, the tower is located with a bigger distance (38m) from an office complex (at corner of Marszalkowska and Grzybowska Street). Such distance protects the ‘60s apartment block (standing between new tower and the offices, moved back from the street) from shading. The footprint of the tower is 53.5m x 19m.

Program

The tower is dedicated to commercial purposes, office space, in order to stimulate the economy; moreover, residential purposes would make the area (already highly populated) denser. The office spaces occupy 8000m², from 2nd floor up to 12th.

The lower floors are dedicated to functions than generate urban life, in orders to keep streets alive while offices are closed. More than half of the ground floor is dedicated to a few shops or one big shop. On the ground level also a café/ urban bistro is programmed, which also serves as an entrance to the restaurant on the first floor. The restaurant occupies the entire first floor and has a direct connection to the deck, where a big terrace is located directed away from the noisy street.

Flexibility

I want to keep floor plans of the tower as flexible as possible. The floor plan allows for creating many variants of office space: open floor plan, mixed or separate rooms. The design of two staircases allows easy flow of people in case of emergency. The plan allows for the creation of a central corridor through the central axis of the tower, as well as routing on the outside, around the façade. These different options can be defined for the specific needs of each company.

The elevators, main staircase, installations and toilets are grouped in one core in the western corner, which allows freedom in renting options per floor: One company per floor (with is reception desk next to the core) or a division of the floor for many separate rentable units.

The flexibility of the plan has also been applied to the restaurant, which can be divided for smaller units, in case of closed events (weddings, conferences, concerts). The size of the restaurant and the terrace make transformation of the complex into a cultural centre possible.

Delivery of goods to the restaurant (via the café) and shop is possible from the back, from within the parking garage. All facilities of the restaurant, like kitchen, social room, storage, office of manager are located on the first floor, directly next to the restaurant. The café and restaurant can work independently of each other. The restaurant also is also accessible from the offices from the core with elevators, so employees can use it as a lunch cafeteria without getting out of the building.
envelope of tower

offices and entrance

shops

restaurant and cafe
5.4 | Tower

5.20 Ground floor of the new development, with space for shops, entrance to the offices above and cafe/bistro. The parking garage and delivery of goods are located behind commercial functions. Scale 1:200
5.4 | Tower

5.21 First floor of the tower with big restaurant.
Scale 1:200

5.22 Typical flexible office floor, “call centre” concept
Scale 1:200
5.23 Typical flexible office floor, "open plan" concept.
scale 1:200

5.24 Top floor - green roof with plants, trees and fence protecting from the wind. Sitting areas can be used for work, picnic or meetings of users of tower.
scale 1:200
5.4 | Tower

**Façade**

After defining the envelope and functionality of the tower, my attention focused on the form and aesthetical aspects. The function of the tower (offices) requires lots of light to provide good working conditions. In order to lower the usage of artificial light, I propose to make the façade as transparent as possible, with glass panels from floor to ceiling. The next step was finding the relationship between the green deck and glass façade of the tower. The solution came from research of engineering consultants DHV, about the influence of green in working environment and productivity. On each office floor, I propose a ring of vegetation, all around the building on the outside. People can look at the green which improves their productivity, makes them feel better. Moreover, by adding green on the outside, people become aware of seasonal changes from the changes in the green. People, who spend most of their working days inside, can now also observe changing vegetation and get a feeling of season.

By tilting the glass façade outwards in an angle of 109° (mirrored from the steepest slope of the deck), refers to the deck and also allows people to get even closer to the vegetation ring from within the building and look down to the urban street life as well.

The ring with vegetation which is sticking over the actual working floor protects the interior from overheating by sunlight during summer. The effect of screening will be enhanced by planting different types of vegetation on different sides of the tower. The shortest plants that like the sun the least will be on the northern side. Very lush, hanging and sun liking plants could grow on the south side, in summer all most completely covering the façade, protecting the interior and saving energy on cooling and shading.
glass facade

green facade

green terraces

angled facade
5.4 | Tower

Twelve floors with tilted façades, stacked on top of each other, almost like a reverse Egyptian “Mastaba”, act like a tower of mirrors which in each layer reflects different parts of urban life happening down on the streets. Such mirror effect will reflect back sun light, down to the street, where normally the sun rays don’t reach, (because of the high surrounding buildings), especially in the winter or late afternoon, when the sun is low. This gives a new meaning to the phrase: ‘The sunny side of the street’.

In order to keep the technical detail and façades as simple as possible, just one type of angled glass panel will be used from bottom to top. Tilting the façade allowed covering the ring with vegetation around the glass façade, without any thermal bridges, by also only using the glass. Any thermal insulation that would be visible on the façade (and would have to be covered by stone or aluminum) is not needed.

5.29 Visual relation between interior of the office space and green

5.30 Green as sun screen

5.31 Reflection of urban life and bringing sunlight to the street level

5.32 Fragment of facade with plants and reflection of street life
visual relation with green and outside

Green as sun screen

reflection of urban life

fragment of facade
5.4 | Tower

5.33 Typical office space with the green ring on the outside and plants shading the interior
5.4 | Tower

Urban ground floor

The deck ends at the street with its steep slope of 71°. Here, also the angled glass of the green tower is touching the deck. The functions of the first two levels of the tower enhance urban life (café, restaurant and shops), that’s why the finishing of the deck should be urban and relate to these functions. At the street side, on the ground floor, entrances to all functions are located within the slope. The tilted wall of the slope will also get structural glasing. The Angle of 71° will allow a better visual relation between pedestrians and for instance the exhibition in the shop’s window, to be more inviting to enter the shop or café.

Fifth façade

A tower, like a column, should have trichotomy, according to Vitruvius: a base (glass plinth), a shaft (glass with green) and a capital (ending). For the green tower I wish to create a green capital; a green garden is created instead of an asphalt roof with technical installations. The garden is surrounded by fencing (tilted in the same angle as the glass), on which vegetation like Hedera rhombe can climb over and protect the garden from traffic noise, wind or sun. The roof garden or fifth façade (reference to the 5 laws of modernism) would be a place for employees to rest during the breaks, or even work in a even more green, quiet and inspiring environment. The roof garden is equipped with furniture like benches and tables.
glass ground floor

relation ground floor - street

green roof - fifth facade
5.28 Urban ground floor with entrances to office tower, shops and cafe - impression
5.30 Southern, street facade of the tower, made of green and glass
scale 1:200

5.29 Section B-B across the tower showing relation between all functions.
scale 1:200
5.4 | Tower

5.31 Green tower in urban context, view from Grzybowska and Marszałkowska Street intersection
Respecting the architecture

In my strategy I decided to respect the architecture of the ‘70s blocks. The only intervention I propose on the façade is restoring the glass bricks in the vertical strip. I am not changing floor plans where the apartments are, neither adding nor removing any dwellings, because those are privately owned. Moreover the economical and social future in Poland and Warsaw isn’t known yet. Till recently, prediction were saying that when the society becomes older, small dwellings like those in Behind the Iron Gate, may be enlarged by combining dwellings, in order to meet the same standards like in other European countries (population won’t grow anymore). Recent studies on real estate market show that the trend of growing sizes of dwellings due to wealth growth may not occur. In Wroclaw, 4th the largest Polish city, the first luxury apartment block with mini dwellings (from 10m2 to 25m2) was recently constructed. That shows that small dwellings, especially in such location like Behind the Iron Gate may become even more popular.

Indoor program

In order to leave the future for the blocks open, to solve their problems and to upgrade them, I defined a renewal program based on my research. The new proposed program I would like to provide on the ground floors, from which I removed the commercial spaces (strategy described in master plan). I have tried to keep the ground floor as flexible as possible, so, depending on needs specific to each block, the program can be adjusted. The new program (may) consist(s) of:

1. **Common room – Community living room**

   This space may offer a solution for the small dwellings. Seniors can meet and play cards, on cold winter days. Also the children can play indoors. This space can be helpful for the integration of residents. Events like New Year’s Eve or children’s birthday parties could be organized there. In the kitchen, senior residents could cook lunches or dinners for those who find their kitchen too small and uncomfortable or for employees from the nearby office towers for a small fee. This form of entrepreneurship is very common in big cities. In downtown Warsaw, you will often find posters in the windows of apartments saying “home dinner” with a phone number. Interested people must call and check for availability. A “grandmother” cooks in her kitchen, very affordable and tasty meals, like at home. Such initiative can close the gap between generations and can break down the walls and floors separating neighbors.

2. **Rental spaces connected to the common living room**

   Next to the common living rooms I have programmed two additional spaces, which are flexible spaces that can be connected to or disconnected from the living room. In case of big events (dancing, big meeting), those spaces can enlarge the common living room. During the rest of the time residents can use the small rooms for small business or initiatives like yoga sessions (given by a resident for seniors) or for a collective child day care center (kindergartens are too expensive and hard to get for people with low income, what makes them postpone the decision to have a child). The common living and rental spaces will get direct access to a small garden/terrace that can support and extend those facilities in summer (with barbecue for instance).

3. **Common toilets and showers**

   Next to the common spaces, I propose common toilets and showers, for residents to us during (sports) events or after using outdoor facilities or after gardening, so they don’t have to go 15 floors up, for simple physical needs. Showers can be useful in case of people working in their small gardens or when residents decide to transform rental spaces into a small gym.
5.5 | Existing blocks

4. Storage for bikes, prams, walkers

Biking is nowadays becoming more than a leisure activity in Warsaw, because the public transport becomes more expensive, but the network of bike paths is becoming denser. People also use bikes as an alternative way of transportation, especially when they live and work in the city centre, where parking becomes more difficult. Right now it is very common is to keep your bike in the collective space at the entrance or in your own apartment (if there is still space left). I have programmed a dedicated bike storage space, which can also be used by families with children or seniors (ageing population will use more walkers or electrical small cars).

5. Laundry room

This function can help the residents with too small apartments. Instead wasting valuable space of their home on a washing machine (in case of singles, 1m2 of surface is used once or twice a week), they can do laundry in common room. While waiting for laundry, residents can interact with each other.

6. Additional storage space

Additional storage spaces can be rented or bought by residents, in case they need additional space, which is especially attractive for older people who live in the smallest 27m2 units. It is my intention to create, space that is socially controllable, on the back of the building, because there new dwellings with gardens and collective functions are programmed alongside.

7. Rental spaces / dwellings

On the side of the block opposite to the deck, rental spaces are programmed on the ground floor, which can be used as affordable rental space, where residents can start their first business. Those units can also be rented or bought by owners of the apartments directly above, who wish to enlarge their dwelling (vertically) and who get a direct outdoor space (a small garden at ground level. Such gardens, together with the terrace of the common spaces will contribute to the social control at the back side of the block.
5.5 | Existing blocks

Deck – Block

Currently blocks have entrances on both sides of the block, west and east; there is no functional front or back. Construction of the deck redefines the sides of the blocks, creating a “front” at the deck side, where the main entrance for visitors and the post man, as well as the entrance from the parking are located. The other side is the “back”, also with an entrance like now, but this entrance has a purpose mainly for the residents.

The height of the deck is 3,6m, the same height as the first floor of blocks. To make the deck accessible directly from the blocks, a third entrance is proposed on the first floor in the middle of the building, where the vertical routing (elevators, staircase) is located.

As mentioned before, in chapter 5.1 (Deck), the new structure is disattached from the block (distance 1,8 m), to enable the necessary construction and dilatation. Moreover, not all residents on the first floor would wish to get a garden or “ground” at front of their windows, many of them would install steel bars in the windows for safety reason (very common practice in Poland, disturbing the architecture of façade). Keeping distance between the deck and blocks, allows sun to reach the ground floors, where the collective functions are located. The distance also makes the front of the building visually more attractive, where the formal entrance is located.
5.6 | Landscape

Program

The top of the deck, covering the parking, metaphorically serves as a second level of space. On the deck outdoor functions are located, serving the residents needs and improving their living facilities. The added program, based on the research, is divided into types:

1. Private/Individual

Urban farming on allotment gardens (ogrody działkowe) creates a great chance for people to have their own piece of land, where they can grow their own vegetables, fruits, organize a barbecue or just relax, without the necessity to leave the city centre, as normally is the case with typical (suburban) allotment gardens. Two groups of gardens are located directly next to the blocks.

2. Collective

The collective program on the deck like a playground, small sport facilities, sitting area with benches and places for picnic or barbecue, compensates for the space claimed by the parking under the deck. Collective functions are located in the middle part of the deck, between the two blocks.

3. Public

Public functions are not directly related to the residents, like the terrace of the restaurant from the tower.

Landscaping

The types of landscape described above are grouped in patches. Each patch is physically "transformed", in a similar way as the edges of the deck, to make the distinction between each function. This is done by pushing the patch down and pulling up, relative to the rest of the deck. It's my intention to achieve effects of privacy, extroversion, introversion, etc., by creating these differences of height (like 'hills'). For instance, in case of a more public hill, one closer to the street, the height difference has a goal to visually separate the terrace of the restaurant from the collective part of the deck.
5.6 | Landscape

Gardens

I intended to have a flexible shape of the allotment gardens. I want people to decide how they will use the gardens. The gardens are somewhat hidden from the perspective of a person standing on the deck, because they are raised. The raised level of the gardens also allows for more accumulation of soil, necessary for trees or other types of vegetation people wish to plant. The gardens will be hidden from the view from the blocks by fruit trees (changing over season, stimulating biodiversity).

The gardens won’t be fenced. Safety and social control over the gardens will be achieved by placing them directly in front of the blocks and by the height difference, the steep slope and the surrounding vegetation. Conifers and sharp plants, like heather and juniper, should discourage from entering gardens other than by specially designed stairs.

In general pulled down and pushed up segments of the landscaping of the deck form an important feature of the design and serve different purposes. Cavities in the landscaping allow for accumulation of soil, needed for vegetation and slopes form natural boundaries between different functions. Steep slopes with lush vegetation discourage entering some sections, while shallow slopes invite going there and use them for relaxation.
pulling up

steep slopes and vegetation

pushing down

division

72°

+1,5 m

-0,5 m

-0,5 m

+1,5 m
5.6 | Landscape

5.42 Individual part - allotment gardens, impression
5.6 | Landscape

Collective program

A sitting area with benches is located in the most central patch, which forms a depression in the landscape to achieve an introvert effect. Very smooth slopes / ramps lead to the inner most cavity of the depression in the deck. The patch is finished with a wooden deck, which allows rain water to go through in between planks. A hole, in the middle of the depression, allows the excess of rain water through. The cavity naturally forms opportunities for sitting places in the steps. Street furniture is also made of concrete, covered with a wooden surface for usability. In that way, the street furniture is also presented as being pulled out of the deck, the same as the landscape.

Another patch is a hill dedicated to sports and playing. The top of the hill is covered with a rubber carpet, commonly used for playgrounds, making the surface safe and comfortable for children. Again, a depression in the landscape forms the natural opportunity to form a sand box, around which residents can sit and talk, while the children play inside. Besides of that the program of the sports hill includes a sports area encaged within nets, as well as green landscaping elements.

The third collective patch functions as a picnic place, which is finished with standard concrete tiles of 30x30 cm. On top of this plateau long concrete sitting benches with concrete tables are placed. The design of this furniture relates to the different slopes on the deck and landscape. In the picnic and sport hills fruit trees are planted, providing shade and reducing noise levels.

The hills for sports and picnic are for anyone to use, therefor they have very smooth slopes, to invite people to walk on them. They have the comfort (steepness) of Polish stairs; additionally one of the edges of these patches is extra smooth, functioning basically as a ramp.

5.43 Pushing and pulling patches for collecting rain water
5.44 Smooth slopes and ramps for accessibility and ramps
5.45 Different materials - meadow, wooden deck, concrete for picnic and play ground rubber for sport
5.46 Furnishing and fruit trees
5.6 | Landscape
5.6 | Landscape

5.48 Collective program - picnic area with concrete furnishing
5.6 | Landscape

5.49 Collective program - sitting area, heart of the deck, forum for social interactions
5.6 | Landscape

Public program

One patch is programmed for general public use. This patch is also positioned on a hill, and covered in grasses and meadow plants, enabling people to ‘lay in the grass’. A hole in the deck in the center of the patch serves for ventilation of the parking space, and at the same time allows for trees from the ground level to grow through the hole and to surface above the deck. Finally, the hole and the trees provide a spacious experience from underneath the deck, together with the visibility of the landscape from underneath the deck.
pulling

green hill for lying on

holes for trees

natural ventilation
5.6 | Landscape

Architectural expression of parking

Since the parking space in between the blocks and under the deck serves as the main entrance for residents, I intended to create an interesting space, other than a standard boring parking garage. First of all, the interior height between parking surface and deck is 2.8m (normal garages must be at least 1.9m high). But the different slopes and functions placed on top of the deck are also visible from underneath. Patches with allotment gardens and depressions in the landscaping are pushed down, appearing underneath as the contra form (interior height becomes 2.3m). The more public patches (green hills for relaxation), rise 3m above the deck. Underneath, this creates a local height of 5.8m. The hills, that create concave spaces underneath, have holes in the middle, which is perceived from down below as an 'oculus in a dome'. From the soil of the ground floor, large trees can grow, which go through these holes in the deck to receive direct sunlight from above the deck.

Polish law demands that rain water has to be handled on the plot itself. Most of the rain water will remain in the soil of the deck, in order to be used by the vegetation and ultimately to evaporate. The excess of water can fall from the edges of the deck, via the slopes to the soil of the park, or over the edges next to the blocks, and through the hole in the depression of the sitting area. There, where water goes over the edges (next to blocks and through the hole), water can collect in a cavity in between the parking spaces which serves as a puddle, where water liking plants can grow. A person standing under the deck during heavy rain will experience the sensation of a waterfall dripping from the hole in the ceiling into the puddle underneath.

The deck is supported by concrete columns with a square cross-section. The top of the columns have a widened head to disperse the load, enabling to design the deck without visible beams underneath. By doing so enhancing the spatial quality underneath, making the contra form of the landscape above visible, this wouldn’t work if there would be visible beams. Implicit beams are formed by the shape and direction of reinforcement within the deck.
Furnishing

The pedestrian entrances to the parking garage are combined with the stairs leading to the top of the deck. The stairs are also sitting spots. Above the actual entrance, there are stairs leading to 'nothing'. These stairs form a tribune to sit and observe what is going on on the deck, and at the same time these ‘flying stairs’ indicate the entrances to the parking area.

The stairs (as well as the edges of the deck next to the buildings), will be fitted with a railing, consisting of simple wire-in-plastic mesh in a frame of steel tubes, commonly used in communist times as fences.
5.6 | Landscape

5.56 Schematic representation of the deck with the landscape and program

5.57 On next page: floor plan of the deck, view from the top
scale 1:400
5.6 | Landscape

5.58 Central point of the deck with green office tower in the back and stairs overlooking the deck
6.1 | Outlook to the future

Next step

As a conclusion of my thesis I would like to present a sample of how my strategy, worked out for the specific spot in Behind the Iron Gate, could work for the whole area. In my vision the first step of renewal of the area, is the project that I have worked out and which could be completed in 2015. Following the first project, developers could use the principles from the master plan to developed the other places in the area and/or improve existing developments from after 1989, taking my project as the example. In this process, a street, in this case Grzybowska Street, would get urban character and the spaces inside the block, between the apartment blocks, would get a collective, residential character, where residential life and ecology can co-exist.

New green spaces between the blocks, seen as contemporary and sustainable, are complimentary to the architecture of blocks, rather than disturbing to it. Moreover, the urban structure of “The Functional City” is preserved and co-exists with new commercial development.

Included impression show how the whole city block could look like in the year 2030.
6.1 | Outlook to the future

6.02 Street facade after construction of first pilot project

6.03 Park facade after construction of first pilot project
6.1 | Outlook to the future

6.04 Situation after filling up whole city block, around 2030
Warsaw has gone through many different political systems. The city, people and its architectural identity have been reshaped many times. In the present situation the further development of the city asks for active involvement from its stakeholders. Apart from using the monetary system, Poland has a democracy, in which society can democratically influence any sphere of life. The same way society can influence what happens to their cities, to make sure the free market will not just destroy identities but can also play its role to enhance them. My main intention, which hopefully I fulfilled, was proposing the strategy, that can show to developers, officials and citizens that money / new development can be applied in a proper way, to serve the needs of everybody (planet, people, profit). I must admit that the philosophical aspects of my thesis played a primary role in its definition. The aesthetical aspects in the thesis were secondary to me, even though I desire and adore beautiful places.

I hope my proposal holds an intellectual contribution to architecture, and provides a different point of view on the problematic architecture of ‘70s housing estates. And I also hope that my proposal can make society think twice before deciding to destroy modernist area, by the same time destroying part of our heritage.
6.3 | From author

Personal conclusions

It is my opinion, that in the master project, the goal of the graduate student is to combine all his knowledge and experience in the fields of philosophy, city planning, architecture and engineering, gained during his education. The result of that combination should be a master piece which is a passport to his or her further career. The master project places a graduate student in the academic society.

During this project, I have tried to combine all my knowledge, with my designer intuition and my own soul. During this process I gained and improved my skills but the knowledge and skills are not the greatest trophies. After one year of hard work on the project, I have realized that the goal is to grow up to become a mature designer. The process places students in a pressure never experienced before: pressure of time, pressure of deciding what he or she really wants to achieve. In the long struggle, I realized that in order to become an architect / designer, I needed to find the inspiration inside me and I should follow the internal voice, the design intuition, which may be partially trained and based on the experience, but in large part that intuition is a gift we are born with. Probably, the same intuition made me go for architecture, instead of medical studies seven years ago. I hope the same intuition and sensitivity will stay with me and help me to become a better designer, who wants to face challenges of the ever changing, exciting and brave world we live in.

Special thanks

This project could not be completed without the help of my tutors, advisors and people close to me, my friends. I would like to thank my tutors: Jos Bosman (chairman), Klaas van der Molen and Wouter Hilhorst. I am grateful for their patience and their knowledge and for the time they spent on helping me. They have enabled me to look at architectural problems and issues that are close to my heart from a different perspective.

Thanks to all experts that contributed their knowledge and experience. I would like to begin with Marcin Andrusieczko, who shared with me his personal archive about Behind the Iron Gate and his knowledge about the area from the perspective of resident. I would to thank Marjan Mohammadzadeh Sarab, who gave me advice in field of urban scale, Indre Kalinauskaite who helped me to focus on necessities of users in the area, Tim Kouthoofd for the technical and economic dimension, Geert Verbruggen for sustainability and Niclas Mika, for communication.

Special thanks to my friends, who were always very supporting me in hard times of doubt and weakness. Thanks to those, that I didn't mention, and who contributed to my thesis one way or another.
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Images and figures

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Appendix includes more detailed drawings of the architectural design of deck and new tower.

Drawings:

8.01  Deck - west facade
8.02  Deck - long section B-B
8.03  Tower - north facade and deck section D-D
8.04  Deck - section next to block
8.05  Deck - section E-E
8.06  Deck - north facade
8.07  Tower - vertical detail of facade, ground floor
8.08  Tower - vertical detail of facade, typical floor
8.01 Western facade, with existing block, entrance to parking garage and tower

8.02 Deck - section C-C and tower east facade
8.03 Tower - north facade and deck section D-D

8.04 Deck - section E-E

8.05 Deck - section next to block

8.06 Deck - north facade
8.07 Vertical detail of tower’s glass facade - ground floor
scale 1:20

Structural Glazed Glazing
disc frame (glass AA1900) -
no relfection panel 18mm

FRAME CONNECTOR
steel L 127x127 15mm

FLOOR
suspended floor 22mm multilayer
interlayer: spaces 935mm apart
installation space 439mm
in slab reinforced concrete floor 250mm
8.08 Vertical detail of tower's glass facade - typical floor scale 1:20