

NEW MUNICIPAL SPA IN THE KRNOV SWIMMING POOL

TWO-PHASE ARCHITECTURAL COMPETITION

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NEW MUNICIPAL SPA FOR KRNOV

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THE JURY



INDEPENDENT MEMBERS

ROMAN BRYCHTA - CHAIRMAN OF THE JURY

Roman Brychta is a graduate of the Czech Technical University and the School of Architecture led by Professor Emil Příklad at the Academy of Fine Arts in Prague. In 2002, he was one of the four founders of the Projektil architekti architectural studio. Their successful projects include the National Technical Library in Prague and the Study and Research Library in Hradec Králové. Among other things, the studio won the first prize in the architectural competition for the design of the Písek Swimming Pool. Since 2011, he has been the head of the Architecture IV studio at the Academy of Arts, Architecture, and Design in Prague, where he also became an associate professor in 2016. In 2020, he founded his own the Roman Brychta architekti studio.

<https://brychtaarchitekti.cz/>

BARBORA ŠIMONOVÁ

As an architect, she collects original approaches and applies them to her creations, based on her experience from foreign residences, for instance in Valencia or Rio de Janeiro. She is a graduate of the New Media Studio at the Academy of Fine Arts in Prague and of the Faculty of Architecture at Brno University of Technology. She also studied at the School of Architecture. She is co-founder of the COSA cultural association, where she and Markéta Mráčková describe and create a new content of architectural work. Their experiment includes architectural creations, artistic installations, as well as a rather original form of the architect association as a response to the architectural reality and working relations in architectural business.

<https://cosa.cz/>

ONDŘEJ CHYBÍK

Ondřej Chybík is a co-founder of the Chybík+Kristof studio. He studied architecture at the Brno University of Technology, as well as at TU Graz in Austria and ETH Zurich in Switzerland. He worked at the Vienna-based studio PPAG. In addition to his architectural practice, he also currently works as a teacher. Together with the Chybík+Kristof studio, he has won several prizes in architectural competitions, for example for the Czech pavilion at the EXPO 2015 in Milan, the Courtyard Social Housing in Brno, and the design of the campus of the Academy of Fine Arts in Bratislava.

<https://www.chybik-kristof.com/>

ZDENĚK SENDLER

Zdeněk Sendlar is one of the most prominent landscape architects in the Czech Republic. In 1982, he graduated in garden and landscape design at the Faculty of Horticulture of the University of Agriculture in Lednice. After the revolution, in 1990, he founded his own studio, Ateliér zahradní a krajinářské architektury. The studio cooperates with architectural studios, but also with building and engineering professions, sculptors, and artists. Among its more unknown projects are the Denis Gardens in Brno, the restoration of the Jirásek gardens in Litoměřice, the restoration of the monastery gardens in Litomyšl or the Celtic park in Dolní Břežany. He was nominated for the Architect of the Year 2016 award. He continues his teaching and publishing activities and is a member of the artistic and scientific council of the Faculty of Arts of the Czech Technical University in Prague.

<http://www.arch.cz/sendler/>



MAREK JURÁNEK - SUBSTITUTE

Marek Juránek studied architecture at the Faculty of Architecture of Brno University of Technology in 2013–2019. During his studies he worked as a graphic designer in the Anderle studio. He founded the Juránek Studio in Krnov.

<https://www.atelierjuranek.cz/>



DAVID KOTEK - SUBSTITUTE

David Kotek studied at the Faculty of Architecture of Brno University of Technology in 1995–2003. Since 2000, he has been working with Projektstudio in Ostrava, which has won several awards, for example for the reconstruction of the front area of Ostrava's Kino Luna or for the energy-efficient Concephouse building, where Projektstudio is now based. He is increasingly devoted to ecology and environmental architecture in practice and in his life.

<http://projektstudio.cz/>

POROTA

DEPENDENT MEMBERS



TOMÁŠ HRADIL - VICE-CHAIRMAN OF THE JURY
Mayor



MIROSLAV BINAR
1st Vice-Mayor



ROMAN ŠIGUT
Municipal Representative



ZUZANA STANJUROVÁ MATEICIUCOVÁ - SUBSTITUTE
City Architect



ZUZANA MATELOVÁ - SUBSTITUTE
Councillor, Municipal Representative, Architect

INTRODUCTION

The project of the New Municipal Spa for Krnov is to be built on the premises of the existing outdoor swimming pool, to which it is to be operationally and organizationally connected and to create a year-round centre not only for water sports, relaxation, and entertainment.

At the same time, the construction of this new project will solve problematic issues in the area, such as the construction of a new parking lot, which will also be used by the outdoor swimming pool.



OBJECTIVES

The architectural design of the solution is expected to meet the required capacities according to this assignment (minor modifications are possible depending on the building's architectural design).

Furthermore, a design for the optimal use of the land planned for the construction of the new facility in relation to the existing outdoor swimming pool area, the new parking lot, etc. is expected

The new sports and recreation complex should offer a wide range of possibilities for:

- swimming (fitness and athletic)
- swimming lessons
- water relaxation and entertainment
- a lucrative sauna area
- possibly fitness gym
- connection to the summer area
- refreshments, massages, etc. as additional services;

In order to increase the attractiveness of the Krnov region, the architectural design should create a modern facility that will provide the following services and benefits that the existing swimming pool facility has not been able to offer to the full extent so far:

- health support
- relaxation
- water entertainment
- support for shared family experiences
- sport activities for individuals and clubs
- swimming lessons
- quality wellness services
- creation of an interesting tourist destination with a focus on the target area and also on Polish customers from the border area;

From an architectural design perspective, the following is important:

- functional design of the new building
- solution of operational links
- clear orientation for customers
- operational solution to ensure future operations with a minimum of staff
- low-energy concept of the building
- minimisation of unnecessary building volume, building clearances, etc.
- simple design solution
- minimisation of investment costs
- design to minimise future maintenance and operating costs
- modern and timeless concept of architectural and landscape design
- barrier-free access for people with reduced mobility and orientation



PROGRAMME¹

OPERATING CONCEPT

The spa will be open year-round.

The building will be divided by turnstiles into zones according to the individual predominant activities and at the same time these zones will have different admission fees / length of stay, etc.

Access from the entrance hall should be through the reception to the shared changing rooms and then through the hygiene filter to the individual zones (1–4).

The changing rooms will be shared with changing cubicles. Some of the changing rooms will have lockable cubicles to be used by groups of children for swimming lessons and for the swimming club. These changing rooms will also be used by general customers outside the swimming lessons time.

In addition, a portion of the changing rooms will be structurally separated for customer changing for the saunas.

The gym (zone 5) should have separate changing rooms for men and women with adequate sanitary facilities.

During the outdoor swimming pool season, this swimming pool will be operationally connected to the new facility and will provide, for example: ticket sales, refreshments, use of the waterslide attractions, the possibility to access the new facility and the outdoor swimming pool and other services.

During the the outdoor swimming pool's main season, a separate ticket office and refreshments will be available on the premises of the outdoor swimming pool.

Shared parking will be proposed for both the new facility and the outdoor swimming pool. A new outdoor parking lot is planned near Petrovická street.

OPERATING EQUIPMENT

Zone 1 – Swimming

The indoor swimming pool is intended for use by the general public for fitness swimming, athletic swimming, and swimming lessons. For swimming, the swimming pool must be suitable for competition and comply with FINA regulations. There will be a 25 m long pool with 8 swimming lanes and a 2 m lane width.

This part should be separated structurally and from other parts (zones).

Lifeguard supervision should, if possible, be shared between this section and zone 2 with the relaxation pools.

A shared steam booth with facilities should also be accessible from this zone in this hall, to complement the services for fitness swimmers.

There should be a small grandstand at the swimming pool for approx. 40 persons, which will be accessible from the hall and through the changing rooms according to the layout. It will be used for occasional competitions or pupil gathering during lessons.

Zone 2 – Relaxation and Entertainment

The indoor relaxation pool and outdoor splash pool will be used by the general public for waterside relaxation and entertainment. Alternatively, a section of the relaxation pool will be used partly on weekdays for swimming lessons, e.g. nursery classes, aquaerobics etc.

Another attraction will be a large whirlpool for relaxation.

An outdoor splash pool will be accessible from the swimming pool hall via a suitable partition, which will be used year-round and will be provided with a water cover.

The outdoor splash pool will be surrounded by an outdoor summer terrace in zone 2, which will be accessible only to visitors to this zone.

An attractive children's paddling pool with water attractions will be located in part of zone 2 to entertain children from 1 year to approx. 6 years of age. A "dry" play area of approx. 30 m² may be located next to the pool.

In the relaxation hall there will be a water slide tower, which will be accessible for visitors to the outdoor area during the summer period. The separation between zone 2 and the outdoor area will be via turnstiles. The installation of two water slides is planned. One family tire slide with a length of approx. 130 m for a minimum of two tire rides and one body slide with a length of approx. 90 m. The slides will land in landing tubs with a water depth of up to 40 cm.

Zone 3 – Sauna World

Zone 3 has an indoor and outdoor area located in a part of the garden of the outdoor swimming pool.

This separate zone offers additional relaxation with a variety of sauna booths and one steam booth. Enough relaxation areas with loungers or seating are required here.

In this zone, part of the area is reserved for ladies only, with the facilities of one sauna (aroma), cooling showers, and a relaxation area. However, this area is operationally part of the whole Sauna World.

The indoor part of the Sauna World is connected to the outdoor sauna garden with two sauna booths, a whirlpool, a bathing pond, and relaxation areas. The garden also envisages the potential for possible development with two more outdoor sauna/relaxation booths.

Visual and noise screening is required between the sauna resting zone 3 and the outdoor entertainment areas – zones 2 and 4

The entire Sauna World operation is waterwear-free.

The design solution should take advantage of the views into the surrounding garden and ensure there is sufficient daylight in the area.

Zone 4 – Link to the Outdoor Swimming Pool

This zone can be accessed separately via the main reception and turnstile in the entrance hall or via a separate ticket office within the outdoor swimming pool.

It is also possible to access this zone via the turnstile from zone 2 for visitors using this zone.

Zone 5 – Gym

This area complements the whole complex and will offer services for fitness and group exercise. There will be a gym and a group exercise room.

Visitors to the gym can use other zones of the whole complex under combined admissions and passes. Entry to each zone is always via turnstiles.

This zone is expected to be rented to an external tenant.

Refreshments

A refreshment service is planned, which should serve at least the entrance hall and zone 2 (relaxation hall) as per the solution design. It is advisable to combine the location of the refreshments

with the possibility of serving part of the outdoor swimming pool and possibly the area in front of the entrance to the building via the entrance hall, where the summer garden would be located.

This refreshment area is intended to be rented to an external tenant.

Another refreshment option will be in zone 3 at the sauna bar, which will be staffed by sauna staff.

The range of refreshments is expected to be as follows – drinks (draft and bottled), hot drinks (coffee, tea), fast food (chips, hot dogs, burgers, small fried snacks, sandwiches, packaged salads, etc.), packaged confectionery, ice cream, sweets, etc.

Snacks will always be served over the counter.

Additional Services

According to the layout, two rooms for massages are expected to be located either in the sauna world or in the entrance hall with access for customers from the entrance hall as well as from the pool relaxation hall or the sauna area.

zdroj: <https://www.archiweb.cz/n/domaci/v-krnove-se-chysta-oprava-koupaliste-postaveneho-v-roce-1934>



¹ Programme prepared by: Relaxsolution s.r.o.

The complete document: https://krnov.cz/assets/File.ashx?id_org=7455&id_dokumenty=35640

VERTICAL ALIGNMENT

With respect to groundwater levels, no significant deepening of the new facility below the existing ground level is planned. The building is assumed to be founded at approx. the existing level with backfilling and sloping of the ground to the south of the building to create an outdoor splash pool and summer terrace for the new building. Conversely, supply and access at 1st underground floor level (mainly to the process units) would be from the North side at the existing ground level.

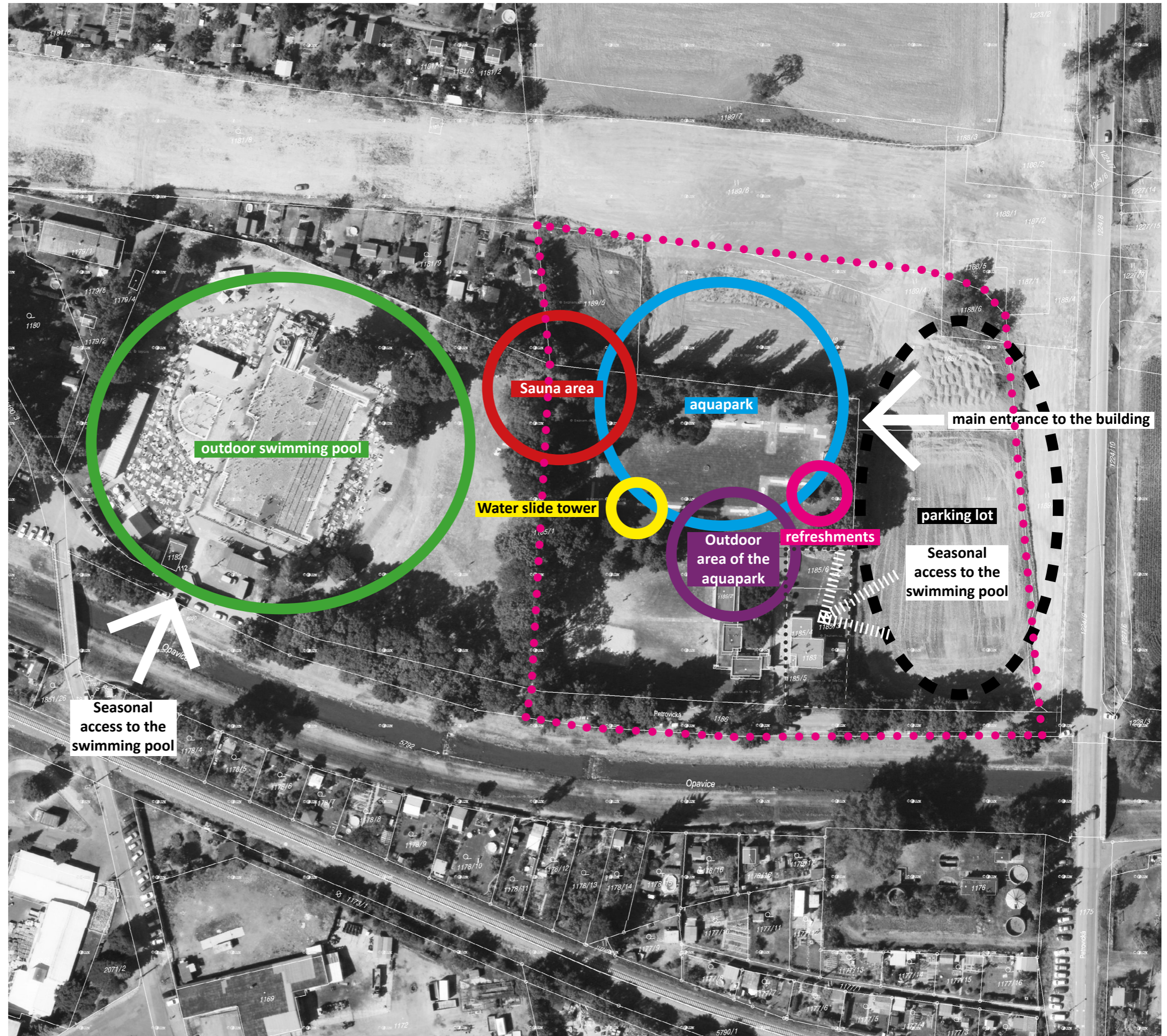
The building is assumed to have one floor at the 1st underground floor level (not necessarily to minimise the built-up area below the entire ground floor plan) and one floor at the ground floor level.

From the point of view of saving built-up space, it is considered to locate the gym in the 1st underground floor while maintaining its partial sunlight through the glazed facade.

The solution depends on the final architectural design of the whole building.

LAND USE ASSUMPTION

In order to ensure appropriate operational linkages, the following basic land use scheme is assumed with respect to the new facility, outdoor swimming pool, and the new parking lot. Furthermore, the location of the new facility's main zones in relation to the surrounding area.

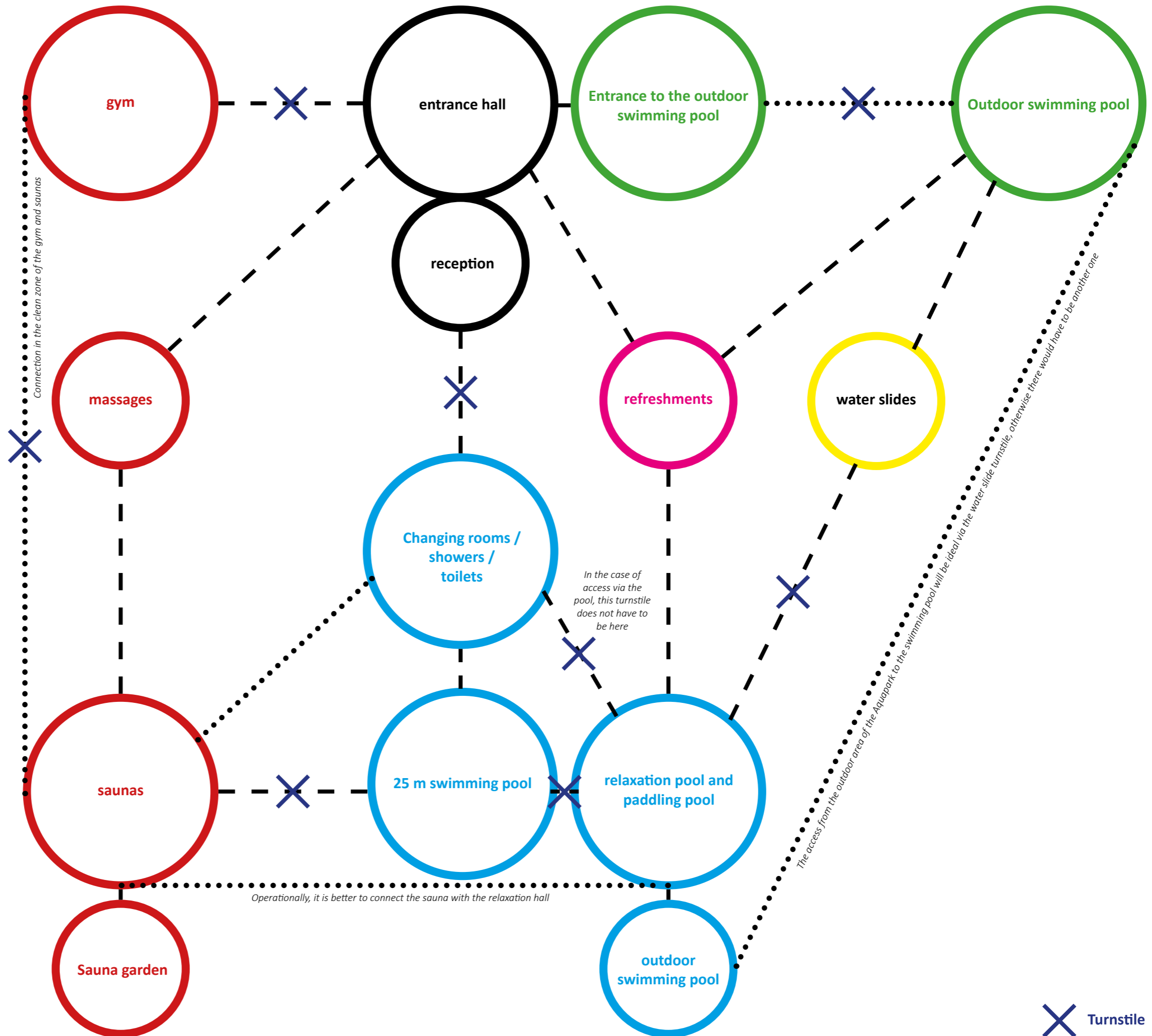


OPERATIONAL LAYOUT

The recommended operating layout of the building and the connections of the individual centres are given below.

It is possible to make minor adjustments to the solution – e.g. the connection of the saunas to the building’s changing rooms, etc.

It is also possible to design a link between the gym’s changing rooms and the swimming pool hall or the Sauna World.



CAPACITY DESCRIPTION

GENERAL INFORMATION

Below are described the basic operating zones with the minimum required equipment in terms of capacity (area, number of persons...), facilities, etc.

This description is used to prepare the basic building design according to the investor's requirements, provided that according to the architectural design some areas can be modified in different layouts, but it is advisable to comply with the basic organisational requirements.

<u>Swimming pool area</u>	<u>Water surface area in m²</u>	<u>Temperature in °C</u>	<u>Capacity of persons</u>
Swimming hall 25 m x 16,68 m swimming pool	417	maximum 28	83
Multi-purpose swimming pool – lessons, recreation Swimming pool approx. 12,5 x 16 m	200	33	66
Indoor whirlpool	20	36	20
Children's pool – Kids fun Paddling pool with attractions	60	33	60
Outdoor splash relaxation pool Swimming pool	100	33	33
Total	797 m²		262

<u>Water slides</u>	<u>Length</u>
Family – tire 130	130 m
Adventure – body slide	90 m

<u>Sauna World</u>	<u>Temperature in °C</u>	<u>Capacity of persons</u>
Indoor section		
Finnish sauna	90	30
Panoramic sauna	80	15
Salt sauna	75	10
Aroma sauna (ladies)	70	10
Steam booth	45	10
Cooling pool	10	
Outdoor section		
Finnish ceremonial sauna	85	45
Finnish sauna	95	20
Whirlpool	36	10
Cooling pool	10	
Small swimming pond		min. 100 m ²
Total		150

Massage – treatment rooms	2
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<u>Capacity of main changing rooms</u>	<u>Number of lockers</u>
Main shared changing rooms – pools	250
Group changing rooms – 4 x 20	80
Sauna changing rooms	70
Total number of lockers	400

<u>Gym</u>	<u>Capacity 70 persons</u>
Gym changing rooms	(40 men, 30 women)
Total	70

ROOM DESCRIPTION

1. FRONT OF THE BUILDING

The outdoor spaces include the public outdoor space outside the indoor and outdoor pool. This is primarily the parking lot and access to the building.

<u>Number</u>	<u>Name of room/area</u>	<u>Quantity</u>	<u>Note</u>
1	Parking lot and front area		
1.I	Supply access via the parking lot		for a 12 m long car
2.I	Passenger car parking	160- 200	
3.I	Parking for bicycles and motorcycles	40	
4.I	Parking for the disabled		
5.I	Parking for buses	2	
6.I	Parking for caravans	10	electricity connection available
7.I	Possibility to sit in front of the building	2	

2. ENTRANCE AREA OF THE BUILDING

The entrance area includes an entrance hall with a reception area and refreshment facilities. There are also areas for individuals and groups (approx. 30 children) for waiting and resting. There may also be a small children's play area where appropriate. The necessary storage and sanitary facilities are provided.

Number	Name of room/area	Quantity	Net area in m ²	Note
2	Entrance hall			
1.II	Entrance area	1		cleaning zone
2.II	Place to store strollers	1		close to reception
3.II	Central hall with reception, refreshments, a seating area at the refreshments, waiting area for schools	1		Attractive zone with a view of the pool area. Reception is at the turnstiles to the changing rooms, to be able to deal promptly with operational matters. There is also a summer entrance in the hall leading to the outdoor area, which is separated by turnstiles. Turnstiles 2 pass-through and to the changing rooms and 1 to the outdoor zone.
4.II	Reception	1		3 workplaces (2 at the entrance and 1 at the exit)
5.II	Reception storage	1	6	for clean linen stock with the possibility of one temporary workplace
6.II	Toilet for reception			in the reception area
7.II	Dirty linen storage		4	
8.II	Toilet in the entrance hall	1		1 Ladies' toilet; 1 Gentlemen's toilet; 1 wheelchair-accessible toilet with the option of baby changing counter
9.II	Shop window	1		
10.II	Areas for information signs/monitors	1		
11.II	Treatment area behind turnstiles	1	10	
12.II	Cleaning room			
13.II	Staircase to 1st underground floor to the backroom and possibly the gym	1		

3. CHANGING ROOM

The shared changing room can be accessed directly from the entrance area of the hall around the reception area via turnstiles. It is divided into clean and dirty zones, which are separated by changing cubicles.

The clean zone has lockers and is connected to the hygienic filter for the pools (showers and toilets).

At the entrance to the changing rooms there are storage boxes for valuables (small and large boxes). Grooming areas with hair-dryers are also provided in the group and sauna changing rooms.

There is a shared changing room area, a group changing room area with four cubicles of twenty lockers each, and a separate area for the Sauna World changing room, which is separated from the main changing room area. A portion of the changing rooms will also be set aside for special swim team changing rooms.

20% of the shared changing room capacity will be reserved for women and 20% for men in the form of sections with gated access from the, 'dirty' corridor and also the changing room area.

Number	Name of room/area	Quantity	Note
3	Changing rooms		
1.III	Changing rooms	400	250 lockers in the shared part of the changing rooms, 126 of which full-size and 124 half-size, 300 mm wide + changing cubicles. This changing area will still be part of the solution of lockers and changing cubicles and separated into a shared section (60% of capacity) and a part separable in interior design for women only and a section for men (always 20% capacity each)
			70 full lockers 300 mm wide in the sauna part of the changing rooms + 2 changing cubicles
			80 lockers in group changing rooms (3.III)
2.III	Changing cubicles	20	there is also the issue of the requirement for separate access to the changing rooms via turnstiles during reception out-of-hours
			25% of which are for family and 1x wheelchair accessible
3.III	Group changing rooms	4	20 lockers each and 1x changing cubicle, 80 lockers in total, 300 mm wide, always 2 wall-mounted hairdryers in each changing room
4.III	Lockers for the disabled	6	in the shared changing rooms
5.III	Zone for hairdryers and mirrors – shared changing rooms	12	grooming areas at the entrance and in the changing room area
6.III	Zone for hairdryers and mirrors – sauna changing rooms	4	grooming areas at the entrance to the changing room area
7.III	Boxes for valuables	40	boxes for valuables 250 x 250 mm
8.III	Boxes for valuables – larger	10	boxes for valuables 500 x 500 mm
9.III	Connected cleaning room with room from the swimming pool hall	1	cleaning room for changing rooms, toilets, showers

4. SHOWERS AND TOILETS

The sanitary facilities are connected to the changing room area. It has a separate section for men and women. The entrance to the swimming pool hall leads through this sanitary filter.

Number	Name of room/area	Quantity	Net area in m ²	Note
4	Showers and toilets			
1.IV	Showers and toilets – gentlemen	1		Showers and toilets in number according to hygiene standards, 2 enclosable cubicles in showers, one shower adapted for wheelchair access in the showers, part of the drying room
2.IV	Showers and toilets – ladies	1		in the showers, part of the drying room, showers and toilets in number according to hygiene standards, 2 enclosable cubicles in showers, one shower adapted for wheelchair access in the showers, part of the drying room
3.IV	Cleaning room connected to the changing rooms and the swimming pool hall	1	10	

5. SWIMMING POOL HALL – 25m POOL

The swimming pool hall with a 25 m long pool with eight swimming lanes is designed for fitness swimming, swimming lessons, and sports swimming. The swimming pool depth is considered to be 1.2–1.6 m. The lane width is 2 m.

There will be a grandstand in the swimming pool hall for about 40 persons as occasional spectators of swimming competitions or for gathering pupils during swimming lessons. It is also required that, in addition to the grandstand, there should be seating for approximately 120–150 additional persons anywhere in the swimming pool hall area.

From the swimming pool hall there is access to other paid areas of the Aquapark via turnstiles.

Ideally, a lifeguard room is designed between the swimming pool and the relaxation pool, with facilities and a view of both swimming pool halls or outside.

There is also a steam box in this hall as an additional service for fitness swimmers.

From this hall the storage of swimming equipment as well as the offices of the swimming school and the swimming club are accessible.

The cleaning room is used for cleaning the shower area or it is connected to the cleaning room of the adjacent relaxation world.

There are shelves in the area for storing swimmers' belongings and benches for pupils to sit on during swimming lessons.

Number	Name of room/area	Quantity	Net area in m ²	Note
5	Swimming pool hall – 25 m pool			
1.V	28 °C swimming pool	1	417	25.03 m x 16.68 m, 1.2–1.6 m deep, 8 swimming lanes, starting blocks on one side, starting blocks must be 4 m away from the wall, access to the pool by one staircase and ladders
2.V	Grandstand for 40 persons	1		
3.V	Lifeguard room with medical room	1		Windowed view of the swimming pool hall with 25 m pool and also the hall with relaxation pools, toilet in the lifeguard room
4.V	Storage room 1 – swimming school	1	10	
5.V	Storage room 2 – swimming club	1	10	
6.V	Storage room 3 – storage for lanes, etc.	1	20	
7.V	Swimming school office	1	10	
8.V	Steam box + cooling shower	1	15	
9.V	Swimming club office	1	10	
10.V	Cleaning room	1	12	There can be a shared one for changing rooms or relaxation hall

6. SWIMMING POOL HALL – RELAXATION AND ENTERTAINMENT

In this swimming pool hall there is a multi-purpose pool of 200 m² with a depth of 0.8 m and 1.3 m. In this pool there are various water attractions (massage beds and benches, massage jets and similar).

This pool will be used partly in the morning for swimming lessons for pre-school children and others. In the afternoons and on weekends, it will be used as a complete relaxation and entertainment pool.

Around the pool and in the entire swimming pool hall area there are relaxation loungers in a minimum number of 50 pieces (or more).

There will also be an attractive children's paddling pool of approx. 60 m² with various water attractions for children aged 1–6 years. There are seating and resting areas for parents around the paddling pool. A "dry" playing zone of about 30 m² can be attached thereto.

There is also a large whirlpool in the hall for approx. 20 persons.

A paddling pool to the outdoor area of approx. 100 m² is also envisaged, which is accessible from the indoor area and also from the outdoor terrace adjacent to this hall. There are also water beds and seats in this pool.

The pools are always accessible via staircases.

From this hall there is also access to the water slide tower with two water slides, which is also accessible to visitors from the outdoor swimming pool. Water slides are suitable for children over 6 years of age and have a shallow run-in tub. The following slides are designed: a tire family slide and a single point slide with light and sound effects.

There is refreshment seating in the entrance hall with a capacity of 30 seats. Additional summer seating is available on the outdoor terrace with a capacity of 20 seats.

Emergency toilet facilities for men and women with baby changing facility are available in the hall.

Number	Name of room/area	Quantity	Net area in m ²	Note
6	Relaxation-entertainment hall			
1.VI	33 °C relaxation swimming pool	1	200	Swimming pool of approx. 12.5 x 16 m, with a depth of 0.8–1.3 m, access via stairs, water attractions – massage beds and seats, water massages, etc.
2.VI	Whirlpool 36 °C	1	20	
3.VI	Children's paddling pool 33 °C	1	60	Children's amusement and slides, depth 0–40 cm, surrounding benches for seating
4.VI	Outdoor splash pool 33 °C	1	100	Swimming pool with a depth of 1.3 m, access via stairs, water attractions – massage beds and seats, water massage, etc., with cover, salt water
5.VI	Relaxation areas with sun loungers	min. 50		
6.VI	Seats at refreshments	30		
7.VI	Emergency toilet for men and women	2		50:50 ratio with baby changing facility
8.VI	Entry to the water slide tower	1		Arrival in the 1st underground floor
9.VI	Cleaning room	1		Connected to the cleaning rooms from the adjacent swimming pool hall or changing rooms

7. REFRESHMENTS

It is considered as a separate "block" (depending also on the proposed layout) serving the entrance hall, the relaxation pool hall, and possibly the outdoor area of the outdoor swimming pool.

It is operationally integrated to allow the refreshments area to be rented to an external partner.

It has the necessary storage facilities, preparation rooms, staff area, etc.

Number	Name of room/area	Quantity	Net area in m ²	Note
7	Refreshments			
1.VII	Refreshments	1	70	A single refreshments block with the possibility to serve the entrance hall, the relaxation pool area, and possibly the outdoor part of the swimming pool. Through the entrance hall and outdoor area outside the entrance to the building. There are storage areas, preparation, counter space etc. There is an emergency staff toilet, and a separate staff changing room.
2.VII	Seating in the entrance hall	20		
3.VII	Seating in the relaxation hall	30		
4.VII	Seating on the terrace of the relaxation hall	20		Partially shaded
5.VII	Seating on the terrace of the outdoor swimming pool	40		Partially shaded
6.VII	Possibility to sit in front of the entrance to the building	16		

8. SAUNA WORLD

It constitutes a separate centre (zone 3) accessible from the changing rooms or from the swimming pool hall via turnstiles. There are sanitary facilities, a sauna area with a cooling zone, a separate ladies' area with one sauna booth (aroma), a shared refreshment and resting area, a relaxation room, 2 massage booths (or possible access to them), necessary storage and technical facilities.

The indoor part is connected to the outdoor garden with 2 outdoor saunas, a swimming pond, and a whirlpool. There is also a summer terrace adjacent to the indoor sauna bar. Alternatively, there may be an outdoor relaxation room in the garden and space for 2 future additional sauna booths.

Number	Name of room/area	Quantity	Net area in m ²	Note
8	Sauna World			
1.VIII	Shared changing rooms	1		Specified in the changing rooms
2.VIII	Ladies' showers and toilets	1		Capacity according to hygiene standards
3.VIII	Gentlemen's showers and toilets		1	Capacity according to hygiene standards
4.VIII	Massage 1	1	12	
5.VIII	Massage 2	1	12	
6.VIII	Storage space	2	6	Changing cubicle and shelves for storing swimwear etc.
7.VIII	Reception/bar	1	10	
8.VIII	Clean linen storage	1	4	
9.VIII	Dirty laundry storage room	1	4	
10.VIII	Bar storage	1	6 persons	
12.VIII	Finnish sauna	1	30 persons	
11.VII	Steam sauna	1	10 persons	
13.VIII	Panoramic sauna	1	15 persons	
14.VIII	Salt sauna	1	10 persons	
15.VIII	Aroma sauna – ladies	1	10 persons	
16.VIII	Ladies' relaxation room + cooling showers	1	30	
17.VIII	Cooling showers	1		According to hygienic requirements, part of showers in lockable stalls
18.VIII	Cooling pool	1	4	
19.VIII	Quiet relaxation room	1	60	
20.VIII	Lounge relaxation area	1		min. 25 loungers
21.VIII	Seating area at the bar	1		20 seats
22.VIII	Maintenance and cleaning room	1	10	
23.VIII	Terrace with summer seating	1		20 seats
24.VIII	Sauna garden	1	700- 1500	
25.VIII	Outdoor Finnish sauna	1	45 persons	
26.VIII	Outdoor Finnish sauna	1	20 persons	
27.VIII	Cooling pool	1	4	
28.VIII	Cooling showers	1		According to hygiene requirements
29.VIII	Bathing pond	1	min. 100	
30.VIII	Whirlpool	1	5	7 persons

9. GYM

A gym is planned in the 1st underground floor that could be rented to an external tenant. However, visitors would be able to use other services of the complex (swimming, saunas, etc.) for a fee.

In the 1st floor there could be separate changing rooms for men and women, a reception area, a workout area for the gym, one room for group exercise, and the necessary facilities.

Number	Name of room/area	Quantity	Net area in m ²	Note
9	Gym			
1.IX	Ladies' changing rooms	1		30 full-size lockers 300 mm wide
2.IX	Gentlemen's changing rooms	1		40 full-size lockers 300 mm wide
3.IX	Ladies' showers and toilets	1		Capacity according to hygiene standards
4.IX	Gentlemen's showers and toilets	1		Capacity according to hygiene standards
5.IX	Bar storage	1	6	
6.IX	Equipment storage	1	12	
7.IX	Exercise area	1	200	
8.IX	Group hall	1	80	
9.IX	Cleaning closet	1	2	
10.IX	Staff changing rooms + facilities	1		Up to 6 persons

10. STAFF AREA AND OFFICES

It is planned in the 1st underground floor with a separate access from the outdoor area and with subsequent access to the ground floor.

In the 1st underground floor, the Aquapark management offices, as well as the changing rooms and sanitary facilities for the pool staff are located.

Number	Name of room/area	Quantity	Net area in m ²	Note
10	Staff area			
1.X	Personal entrance	1		Direct access from the outside and then access to the swimming pool area
2.X	Gentlemen's changing room / toilet / shower room	1		20 persons with double lockers
3.X	Ladies' changing room / toilet / shower room	1		20 persons with double lockers
4.X	Break room with kitchenette	1	12	
5.X	Cleaning room	1	2	
6.X	Office toilet	1		
7.X	Manager's office	1	16	1 workplace + meeting area
8.X	Office	1	20	2- 3 workplaces
9.X	Archive	1	8	
10.X	Server room	1	4	
11.X	Meeting room	1	20	
12.X	Staircase to the ground floor	1		

11. TECHNICAL FACILITIES

The area specifications of the technical rooms are indicative and must be verified by the project's authors in the context of the competition design and according to the final layout (area and height).

Find a list of the necessary area required for the building's operation below.

Number	Name of room/area	Quantity	Net area in m ²
11	Technical facilities		
1.XI	Space for pool technology	1	400
2.XI	Air-conditioning	1	200
3.XI	Heating	1	100
4.XI	Chlorination facility	1	20
5.XI	Transformer station, MV substation	1	50
6.XI	Waste storage	1	50
7.XI	Workshop with storage room	1	40
8.XI	Storage room 1	1	20
9.XI	Storage room 2	1	20
10.XI	Storage room 3	1	20
11.XI	LV switch room	1	15
12.XI	Low current switch room	1	10
13.XI	Pool chemicals storage	1	20
14.XI	Cleaning chemicals storage	1	10
15.XI	Technical command centre	1	15
16.XI	Laundry	1	20
17.XI	Cleaning	1	4
18.XI	Toilets	1	4
19.XI	Accumulation tanks		
20.XI	Other areas, corridors		

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MANUAL OF PUBLIC SPACES OF KRNOV²

The conceptual document, according to which the city of Krnov aims to develop public spaces, classifies the site with the current swimming pool and the surrounding land as **Area 6 - suburban landscape**. It is described as follows:

SUBURBAN LANDSCAPE

Landscape in direct contact with the city with occasional development. This is mainly the locality of Cvilín, Ježník, and Bezručův vrch. In general, however, these are natural sites that are used by citizens for living or recreation, either in the form of walking or gardening.

Here, public space is represented by suburban roads, dirt paths, or forest paths. The rules of the manual can also be applied to rest stops, small architecture, or viewpoints.

Character of the area:

- This is an area outside the city's developed area.
- Open spaces are generally not particularly structured and are shared by pedestrians and cars, with low motor traffic volumes.
- Development consists of single floor detached buildings, roofed with pitched roof planes (predominantly gabled). Recreational buildings – cottages, cabins, and entire gardening colonies predominate.

Values to support:

- Support tourist stops and forecourts at significant landmarks.
- Regular maintenance of existing paths.
- Development of public spaces should be in harmony with nature.

The geomorphological situation around the city creates a landscape with ideal conditions for recreation.

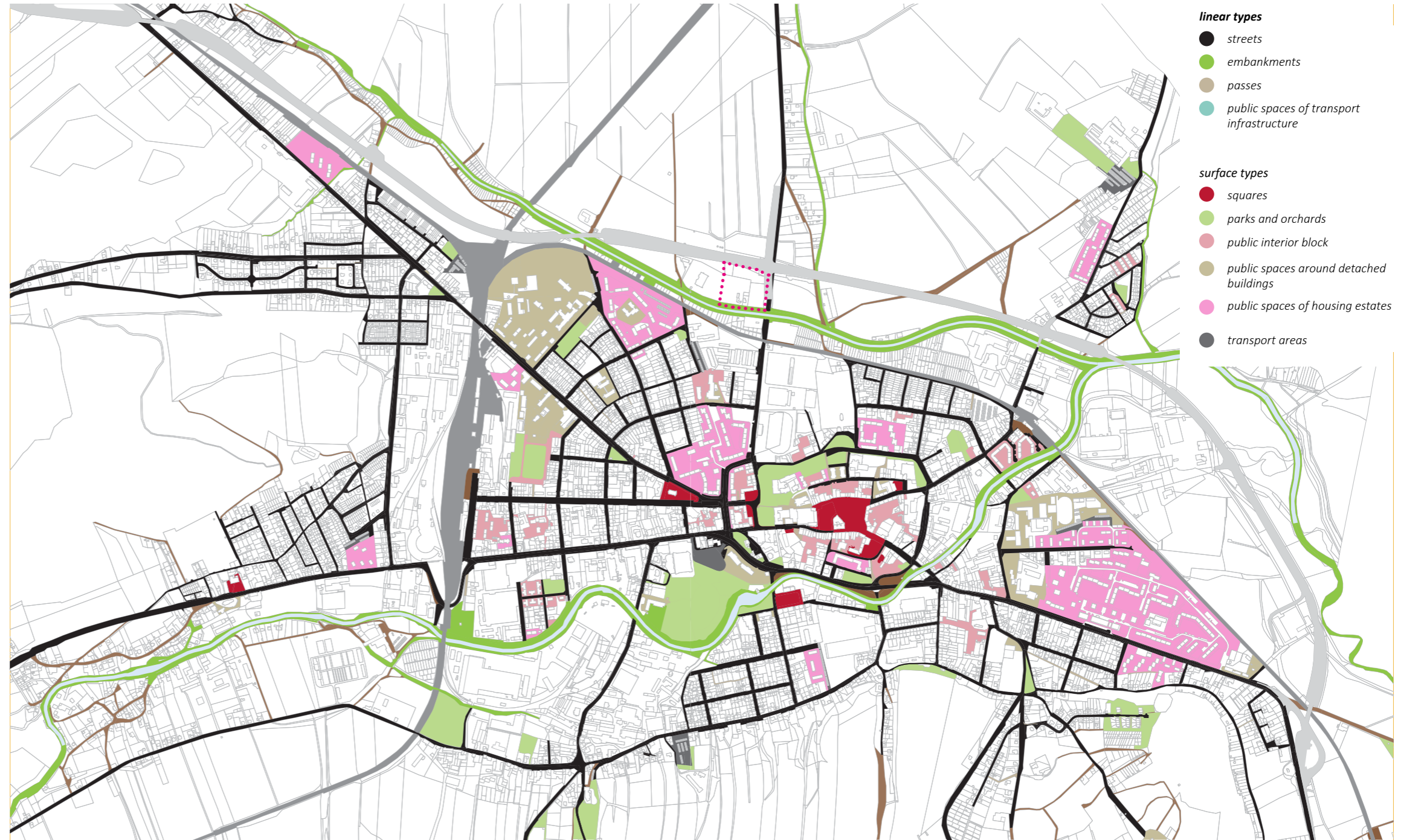
More specifically, the immediate surroundings of the swimming pool also fall into the so-called **linear type of public spaces – embankment**.

The Manual describes the riverbanks of the rivers Opava and Opavice, which flow through Krnov, as:

EMBANKMENTS

Embankments are an important urban space, although historically they did not have the character of a full-fledged public space. They consist of the water surface and the banks that line the watercourses in the city. The dominant feature here is the contact between the river and the natural banks. Due to their size and natural character, they fulfil the function of a bio-corridor and have a primarily residential character. However, in direct contact with urban development they can form generous, representative spaces. High-quality embankments should be intersected by soft transport infrastructure in the form of walking routes, promenades, or be lined with cycle paths or provide access to the water. The Opava River and its tributary, the Opavice, are citywide and historically significant elements that have influenced the development of the city since its foundation. Despite their importance, they are still a neglected part of Krnov today. The city and its administrators have to find a way to the rivers regardless of the tragic floods.

From the other sides, the swimming pool site is bordered by a new road bypass, which according to the Manual belongs to the **Public spaces of transport infrastructure**:



PUBLIC SPACES OF TRANSPORT INFRASTRUCTURE

These are mainly the so-called residual spaces in the vicinity of superior transport roads that are outside the administration of the city (under the administration of the MSK, ŘSD, or SŽDC). The contact of infrastructure with the urban environment, with its public space, represents a clash of two scales – the human scale and the transport scale (car, train). The connection to the local road, various types of crossings, around embankments and scaffold bridges create many unsightly and elusive places. The infrastructure itself has its own protected zone which creates other similar spaces.

Transport infrastructure is very costly in terms of investment, and there are often no funds available to complete its surroundings. It is necessary, albeit very difficult to coordinate, to build it in a meaningful way so as to create quality public space. The infrastructure investor's interests must be aligned with those of the city.

If possible, the creation of undesirable public spaces must be eliminated at the inception of the infrastructure. In its management by the city, it cannot only accept technical requirements and solutions, but must also be subject to the requirements of the city and its life.

It is necessary to seek maximum integration and to resolve conflicts through compromises, either by integrating them into the larger public space (streets, embankments, etc.) so that the infrastructure loses its spatial dominance, or by alternative uses of these places, such as parking lots, skate parks, etc. If neither option is suitable or not possible for very important reasons, it is desirable to address these areas at least architecturally and landscape-wise.

THE OPAVICE EMBANKMENT IN KRNOV PRIOR TO THE CONFLUENCE WITH THE OPAVA RIVER FROM THE BRIDGE IN HLUBČICKÁ STREET

source: https://krnov.cz/assets/File.ashx?id_org=7455&id_dokumenty=36003



COMPLIANCE WITH THE LOCAL PLAN

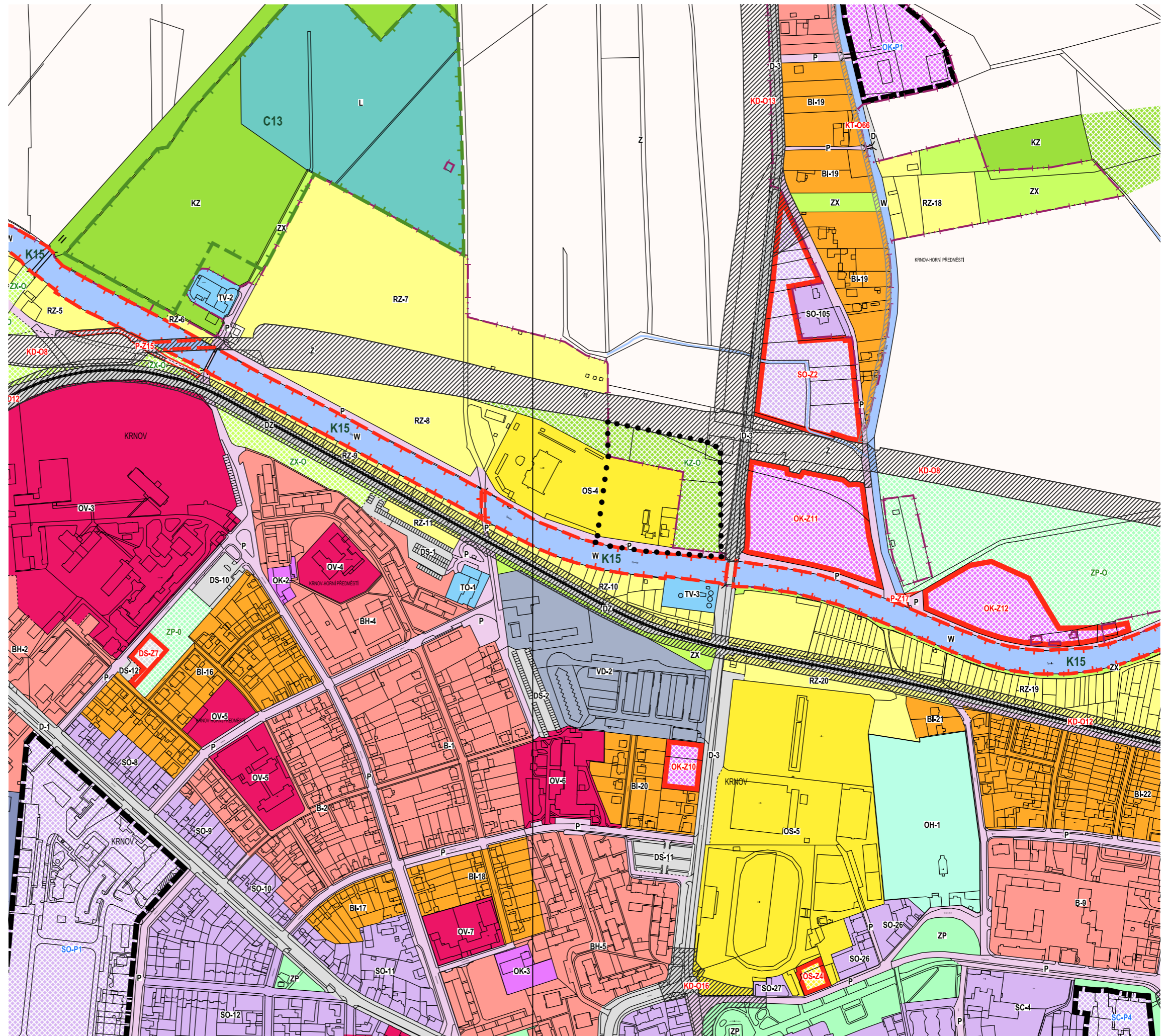
The city of Krnov has a valid “Krnov Local Plan”, issued by the Krnov City Council on 19 May 2010 as a measure of general nature No. 1/2010, which became effective on 8 June 2010, and which is valid as amended by its subsequent amendments No.1, 2, 3 and 4 – the last Amendment No.4 became effective on 9 July 2020 (hereinafter referred to as “Krnov Local Plan”).

The project will be located predominantly in the area “OS-4 – Areas of physical education and sports – stabilized state”.

Part of the project (part of the indoor swimming pool, paved areas, parking, utilities) will have to be placed for spatial and operational reasons in the area “KZ-O Areas of landscape greenery – design”, which is not intended for development. Therefore, the City Council approved the preparation of the amendment to the Local Plan in an abbreviated manner, including the content of this amendment. Until the amendment to the Local Plan is issued and comes into force, no land use decision on the location of the building can be issued.

LOCAL PLAN – MAIN DRAWING

			housing
			areas of housing (B)
			areas of individual housing (BI)
			areas of collective housing (BH)
			areas of housing of specific forms (BH)
recreation			
			areas of family recreation (RI)
			areas of family recreation – garden settlements (RZ)
areas of civic amenities			
			areas of civic amenities (O)
			areas of public amenities (OV)
			areas of public burial grounds and related services (OH)
			areas of commercial facilities (OK)
			areas of physical education and sport (OS)
transport infrastructure			
			road transport areas (DS)
			rail transport areas (DZ)
			air transport areas (DL)
			areas and corridors without distinction (D)
technical infrastructure			
			areas for water management (TV)
			areas for energy (TE)
			areas for electronic communications (TK)
			areas for technical infrastructure (TO)
areas of public spaces (TO)			
mixed use areas			
			mixed residential areas (SO)
			mixed residential areas in the central zone (SC)
			mixed residential areas in the production zone (SP)
water and water management areas			
			water and water management areas (W)
greenery in the landscape			
			areas of landscape greenery (KZ)
			areas of natural greenery (PP)
			agricultural areas (Z)
			forest areas (L)
other significant phenomena to be accepted in the territory			
			local biocorridor



PROPOSAL FOR AN AMENDMENT TO THE LOCAL PLAN⁴

THE SUBJECT OF THE PENDING AMENDMENT ENTITLED “KRNOV LOCAL PLAN - AMENDMENT NO. 6” (HEREINAFTER REFERRED TO AS “AMENDMENT NO. 6”) IS:

- change of the landscape greenery area KZ-O to developable area for physical education and sport, OS-Z...);

- change in the table of detailed conditions for the use of the areas of “physical education and sport OS – stabilized state”, specifically in point 5. Conditions for the spatial arrangement of the development, including basic conditions for the protection of the landscape character;

- change in the table of detailed conditions for the use of the areas of “physical education and sport OS –developable area”, specifically in point 5. Conditions for the spatial arrangement of the development, including basic conditions for the protection of the landscape character’.



The changes in the tables of detailed conditions for the use of the areas ‘OS-... – stabilized state’ and ‘OS-Z... – developable area’ can be seen below from the extract of the justification of Amendment No. 6, providing the original wording of the conditions with the changes indicated.

AREAS OF PHYSICAL EDUCATION AND SPORT OS – STABILIZED STATE

OS-1, OS-3-10

Land use conditions:

1. predominant purpose of use (main use)

- buildings and activities related to sports activities, including facilities for athletes and visitors

2. permissible use:

- facilities for education and training, health services, culture

- catering, accommodation, administration

- non-production services unless otherwise specified in points 3 and 4 of this table

3. non-permissible use:

- buildings and activities whose negative effects on the environment exceed the limits specified in the relevant regulations beyond the permissible level

- buildings and activities incompatible with the main use, in particular:

- buildings for production and storage (with the exception of warehouses structurally and operationally related to the main and permissible use)

- buildings for wholesale trade

- large shops and large-scale shops

- specialised retail shops

- other retail shops

- transport terminals and transport service centres

- garages, stalls and parking spaces, especially for trucks, buses, tractors and other vehicles and special vehicles for business unrelated to the main and permitted uses

- buildings for family recreation (cottages, garden huts, tool stores, etc.)

- no new buildings are allowed in the OS-10 area, only reconstruction and repair of existing buildings is allowed

4. conditionally permissible use:

Significance of land use – stabilized state Areas of physical education and sport

- accept the KD-O2 corridor in area OS-1

- accept the active zone of the established flood area in area OS-10

- accept the KW-O39 corridor in area OS-3

5. conditions of spatial arrangement including basic conditions of landscape character protection:

the coefficient of the rate of land use (KZP) shall be determined as follows:

- for areas OS-1, OS-3, OS-5 – OS-10 KZP = 0.3

- for area OS-4 KZP = 0.7

- the coefficient of minimum green cover (KZ) is set at:

- for areas OS-1, OS-3, OS-5 – OS-10 KZ = 0.30

- for area OS-4 KZ = 0.2

- the building height level is set as follows:

- for areas OS-6, 7, 8, 9, 10 the maximum height of 12m above the surrounding terrain

- for areas OS-1, 3, 4 and 5, the maximum height of 18 m above the surrounding terrain

AREAS OF PHYSICAL EDUCATION AND SPORT – DEVELOPABLE AREAS

Land use conditions:

1. predominant purpose of use (main use)

- buildings and activities related to sports activities, including facilities for athletes and visitors

2. permissible use:

- facilities for education and training, health services, culture

- catering, accommodation, administration

- non-production services

unless otherwise specified in points 3 and 4 of this table

3. non-permissible use:

- buildings and activities whose negative effects on the environment exceed the limits specified in the relevant regulations beyond the permissible level

- buildings and activities incompatible with the main use, in particular:

- buildings for production and storage (with the exception of warehouses structurally and operationally related to the main and permissible use)

- buildings for wholesale trade

- large shops and large-scale shops

- specialised retail shops

- other retail shops

- transport terminals and transport service centres

- garages, parking spaces and parking places especially for trucks, buses, tractors, and others means of transport and special vehicles for business unrelated to the main and permissible use

- buildings for family recreation (cottages, garden huts, tool stores, etc.)

4. conditionally permissible use:

- accept the KW-O39 corridor in area OS-Z5

- accept the KD-O8 corridor in area OS-Z7

5. conditions of spatial arrangement including basic conditions of landscape character protection:

- the coefficient of the rate of land use (KZP) shall be determined as follows:

- for areas OS-Z1, OS-Z2, OS-Z4 – OS-Z6 KZP = 0.3

- for area OS-Z7 KZP = 0.7

- the coefficient of minimum green cover (KZ) is set at:

- for areas OS-Z1, OS-Z2, OS-Z4 – OS-Z6 KZ = 0.15

- for area OS-Z7 KZ = 0.2

- the building height level is set as follows:

- for areas OS-Z4 and OS-Z6 maximum height of 12 m above the surrounding terrain

- for areas OS-Z5 and OS-Z7 maximum height of 18 m above the surrounding terrain

- for areas OS-Z1 and OS-Z2 maximum height of 5 m above the surrounding terrain

THE STATUS OF AMENDMENT NO. 6 IS AS FOLLOWS:

Currently, the proceedings for “Krnov Local Plan – Amendment No. 6” are in progress. A public hearing with expert interpretation will be held on 31 May 2021. Objections and comments may be submitted within 7 days of the public hearing and the authorities concerned will submit their opinions within the same period.

If no objections to the draft Amendment No. 6 are raised, according to the applicable legal procedures and deadlines, it can be assumed that Amendment No. 6 to the Krnov Local Plan will be realistically submitted to the City Council for approval in September 2021. In order for Amendment No. 6 to become effective, the preparation of the so-called full version of the Krnov Local Plan must be ensured. The Amendment No. 6 will come into force on the 15th day following the date of publication of the notice of its issue (delivery by public notice), while the approved Amendment No. 6 must be published at the same time and the full text of the Krnov Local Plan after this amendment must also be published.

THE AMENDMENT NO. 6 IS EXPECTED TO ENTER INTO FORCE IN:

October 2021

SITE CHARACTERISTICS

LAND CHARACTERISTICS

The land for the planned construction is located on the Northern outskirts of Krnov. It is bounded by the area of the existing outdoor swimming pool, the left bank of the Opavice River, Petrovická street and the Northern bypass road under construction.

The land is mostly flat, its elevation level is lowered from the level of the embankment road by about 0.75 m.

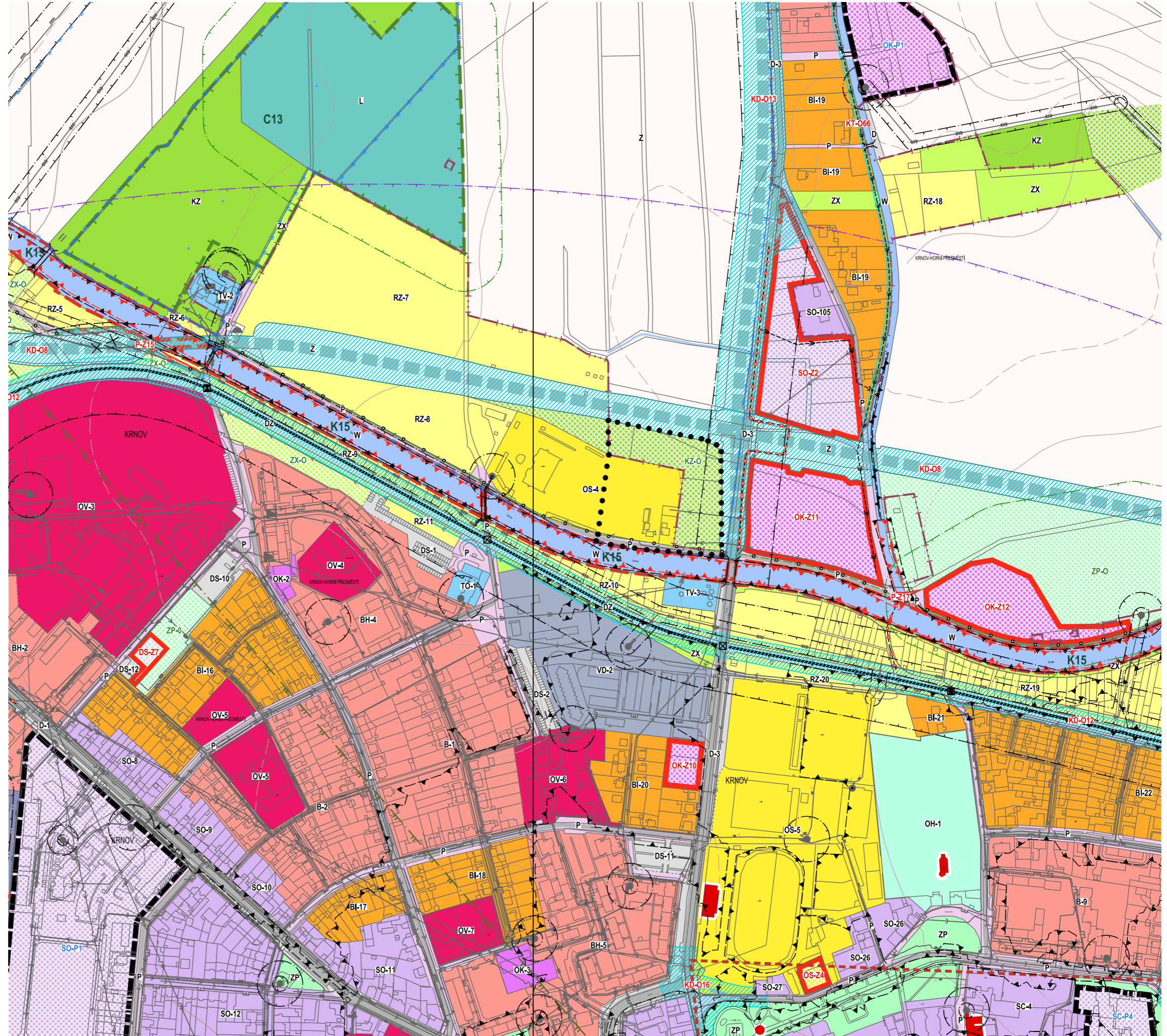
The land boundary between the swimming pool and the proposed building is formed by a grown avenue, grown trees are also located in the Northern part of the land near the bypass.

On the building site there is now the swimming pool's entrance building and changing rooms with sanitary facilities. These buildings are not being considered for use and are intended for demolition.

There is also a residential building No. 366 with a garden in the area under consideration, which is currently to be respected and does not necessarily need to be removed.

In the construction area, especially along the embankment, there are several utilities – water supply, sewerage, PL, LV and telecommunication lines, which will be partly respected and partly relocated, depending on the final design.

The land is located in a level 2 protective zone of the water intake area of the Zlatá Opavice water source.



ADVANTAGES OF THE BUILDING SITE:

- proximity of the outdoor swimming pool area, which is partly reconstructed
- possibility of connection to the necessary transport and technical infrastructure
- plenty of existing greenery, proximity to the Opavice River
- proximity to the Northern bypass of the city, which will allow easy transport accessibility also for the wider radius area
- space for the construction of a capacity parking lot, shared with the neighbouring swimming pool
- possibility of partial coverage of water needs – existing borehole
- sufficient plot size
- space to connect the outdoor and indoor parts of the New Municipal Spa
- the site is not in a flood zone, is not undermined, there are no protective deposits or mining works
- proximity to the largest sports facilities in the city – tennis, football, volleyball, ice rink
- the main land owned by the city of Krnov

TO BE RESOLVED:

- parking with sufficient capacity also for the neighbouring outdoor swimming pool
- method of connection to CHP (if this source is chosen)
- connections to the traffic and technical infrastructure

LOCAL PLAN

In terms of the Local Plan, the land under consideration is intended for physical education and sport. This suits the intention to build a swimming pool with accompanying functions. In order to provide parking, it is necessary to change the functional use of the surrounding land **KZ – Landscape greenery** to the purpose of construction of parking lots, or to use for parking the land on the Eastern side of the site behind Petrovická Street, which is in the functional area **OK – Commercial facilities in the current Local Plan**.

The preparatory work, including the architectural competition for the New Municipal Spa Krnov, can be carried out in parallel with the discussion of the anticipated amendment No. 6 to the Krnov Local Plan.

PROTECTIVE ZONES

- Protective zone of the water source of the level 2 water intake area Zlatá Opavice – the site is entirely within this protective zone. The protective zone is established by the decision of the District Office in Bruntál dated 6 June 2001 Ref. RŽP voda 8658/2000-231-129-Ur/7 and was subsequently amended by a general measure Ref. KRNOZP-89489/2020 MIKL dated 17 September 2020. This measure contains decisive conditions for the construction of a sports complex and a parking lot in the subject area.
- Protective zone of the Northern bypass of the I/57 road, 50 m from the road axis – does not affect the proposed project.
- Protective zone of the railway line No. 310, 60 m from the track axis – the proposed buildings are outside this protective zone
- Protective zones of existing networks - according to the ČSN recommendations

FLOOD AREAS

The site lies outside the flood area, on the Southern edge it is adjacent to the flood area of VT Opavice, which is bounded by a modified watercourse channel.

HYDROGEOLOGICAL CONDITIONS

They are assessed in the hydrogeological study of the site prepared by Ing. Petr Ulahel, authorization No. 1425/201, in August 2018, and in relation to the site use for the construction of this project are assessed in the Final Report KRNOV – PROPOSED CHANGE OF OPVZ ZLATÁ OPAVICE prepared by UNIGEO a.s. In September 2020.

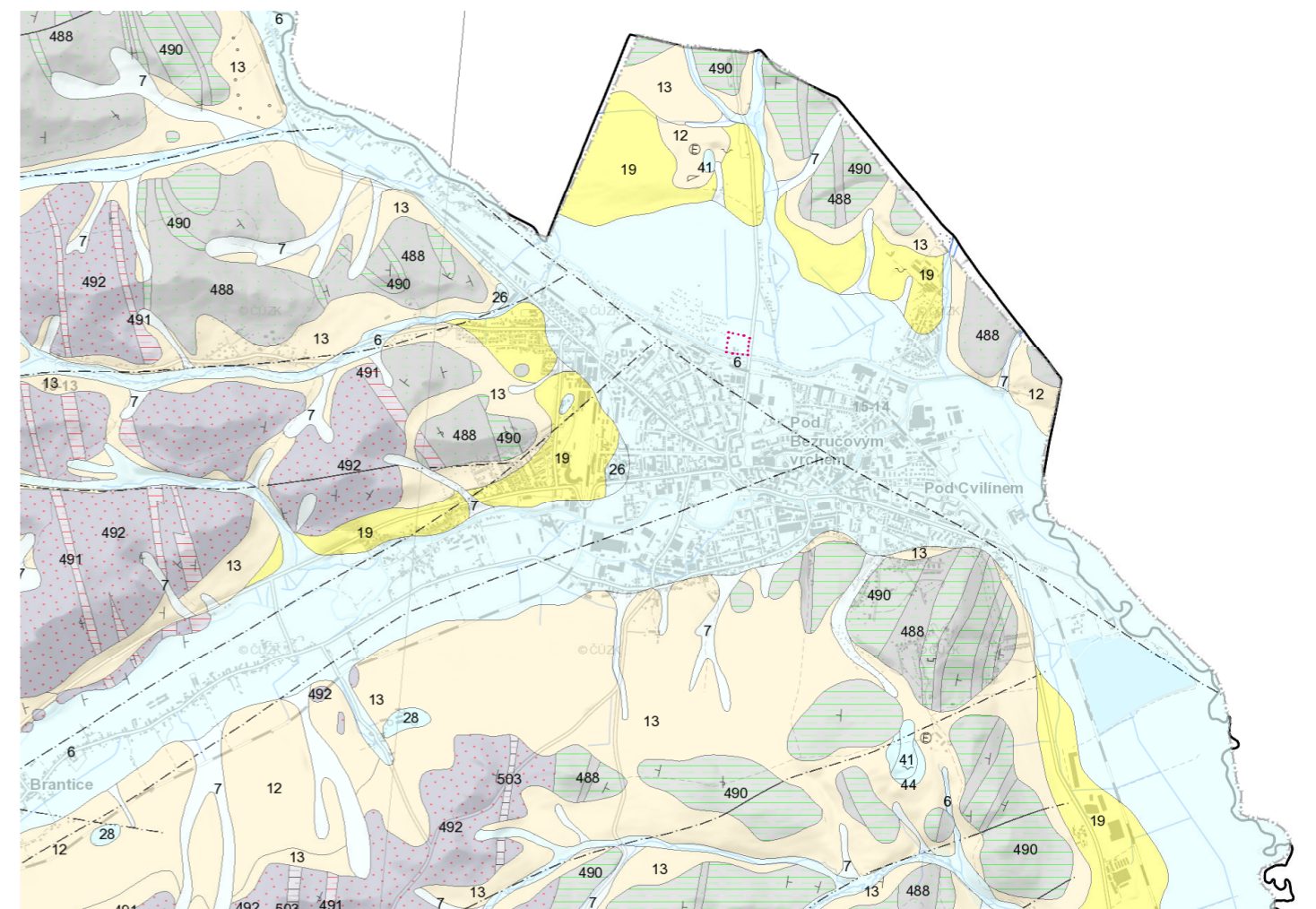
RECOMMENDED SURVEYS

The following surveys should be provided for further design work:

- Detailed engineering geological survey at the construction site
- Radon survey at the site
- Detailed hydrogeological survey and groundwater monitoring at the construction site

GEOLOGICAL MAP OF KRNOV

- 5 alluvial sediment
- 6 alluvial sediment
- 7 mixed sediment
- 12 sand-clay up to clay-sand sediment
- 13 stony to clay-stony sediment
- 19 loess loam
- 24 sand, gravel
- 26 sand, gravel
- 28 sand, gravel



ECONOMIC ASSUMPTIONS

The technical-economic concept and economic efficiency of the New Municipal Spa depends mainly on the size of the settlement in which it is proposed. Therefore, population figures and demographic trends are presented here.

Krnov is an Upper Silesian city situated 22 km Northwest of Opava and 18 km Northeast of Bruntál, in the foothills of the Low Jeseník Mountains. It lies at the confluence of the Opava and Opavice rivers, close to the border with Poland. The cadastral area of Krnov is 4,440 ha. It has a population of 23,269. Krnov has three parts – Krásné Loučky, Pod Bezručovým vrchem, and Pod Cvilínem.

POPULATION OF KRNOV

- as at 1 January 2019⁵

Men (under 15 yrs)	Men (over 15 yrs)	Women (under 15 yrs)	Women (over 15 yrs)	Total
1 555	9 650	1 560	10 498	23 263

POPULATION DISTRIBUTION OF KRNOV

Men (48.2 %)

Women (51.8 %)

Under 15 years (15.6 %)

Over 15 years (84.4 %)

POPULATION HISTORY⁶

Date	Men (under 15 yrs)	Men (over 15 yrs)	Women (under 15 yrs)	Women (over 15 yrs)	Difference	Total
01 2021	1 555	9 650	1 560	10 498	-170	23 263
01 2020	1 596	9 701	1 544	10 592	-172	23 433
01 2019	1 644	9 726	1 540	10 695	-199	23 605
01 2018	1 640	9 825	1 549	10 790	-171	23 804
01 2017	1 625	9 925	1 585	10 840	-220	23 975
01 2016	1 643	10 027	1 605	10 920	-185	24 195
01 2015	1 673	10 098	1 607	11 002	-141	24 380
01 2014	1 701	10 184	1 605	11 031	-189	24 521
01 2013	1 731	10 266	1 601	11 112		24 710

The previous study evaluated the population potential for this investment project in a demand analysis:

- in the catchment area within 15 minutes by car together with Krnov, population of approx. 35,000

- in the catchment area within 45 minutes by car, population of approx. 165,000.

There is a sufficient concentration of primary school pupils and kindergarten children in the immediate vicinity, i.e. at a distance of less than 18 km.

LIST OF KINDERGARTENS IN KRNOV⁷

The current number of children attending kindergarten in Krnov – approx. 831.

Name and address	Number of classes	Number of pupils (school capacity)
Mateřská škola Krnov, Náměstí Míru 12, KRNOV, 794 01	2	currently 50 (capacity for 50)
Mateřská škola Krnov Jiráskova 43 KRNOV, 794 01	5	currently 106 (capacity for 140)
Mateřská škola Krnov Žižkova 34, KRNOV, 794 01	6	currently 145 (capacity for 160)
Mateřská škola Slunečnice, Albrechtická 1702/85, KRNOV, 794 01	4	currently 85 (capacity for 85)
Mateřská škola Krnov, Karla Čapka 12a, KRNOV, 794 01	5	currently 88 (capacity for 120)
Mateřská škola Krnov, Svatováclavská 13, KRNOV, 794 01	2	currently 50 (capacity for 50)
Mateřská škola Krnov Maxima Gorkého 22, KRNOV, 794 01	24	currently 105 (capacity for 105)
Mateřská škola Krnov Mikulášská 8, KRNOV, 794 01	2	currently 50 (capacity for 50)
Mateřská škola Krnov Hlubčická 89, KRNOV, 794 01	3	currently 73 (capacity for 75)

LIST OF ELEMENTARY SCHOOLS IN KRNOV⁸

The current number of pupils attending elementary schools in Krnov – approx. 1,980.

Name and address	Number of classes	Number of pupils (school capacity)
Základní škola Krnov, Dvořákův okruh 2, KRNOV, 794 01	18	currently 410 (capacity for 490)
Základní škola Krnov, Smetanův okruh 4, KRNOV, 794 01	19	currently 412 (capacity for 510)
Základní škola Krnov, Žižkova 3, KRNOV, 794 01	21	currently 479 (capacity for 730)
Základní škola Krnov, Janáčkovovo náměstí 17, KRNOV, 794 01	27	currently 679 (capacity for 760)

LIST OF SECONDARY SCHOOLS AND VOCATIONAL SCHOOLS IN KRNOV⁹

The current number of students attending secondary schools and vocational schools in Krnov is approx. 1,850.

Name and address	Number of classes	Number of pupils (school capacity)
Gymnázium Krnov, Smetanův okruh 2, KRNOV, 794 01	12	currently 346 (capacity for 480)
Střední umělecká škola varhanářská o.p.s., Revoluční 973/54, KRNOV, 794 01	-	currently 25 (capacity for 30)
Střední škola průmyslová, Krnov Soukenická 2458/21C, 794 01 Krnov	13	currently 329 (capacity not known)
Střední škola automobilní, Opavská 49, 794 01 Krnov	13	currently 289 (capacity for 600)
SOS dopravy a cest. ruchu, Krnov Revoluční 92, 794 01 Krnov	12	currently 335 (capacity for 400)
Střední pedagogická škola a Střední zdravotnická škola, Krnov Jiráskova 841/1a, Krnov 794 01	20	currently 526 (capacity for 753)

LIST OF SPECIAL SCHOOLS IN KRNOV¹⁰

Name and address	Number of classes	Number of pupils (school capacity)
Mateřská škola, základní škola a střední škola Slezské diakonie Krnov, SPC N 454/54, 794 01	-	currently 84 (capacity not known)

These criteria give sufficient capacity for visiting the indoor relaxation aquacentre for swimming lessons in the morning.

Krnov ranks 9th in terms of population in the Moravian-Silesian Region. All towns that are more numerous than Krnov in terms of population have indoor swimming pools or relaxation centres. However, there are also smaller towns in the region that have indoor swimming pools (e.g. Břidličná, Rýmařov, Bruntál, Ústí nad Labem, Uničov...).

The previously submitted materials show that the city of Krnov would be able to operate a relaxation centre with basic equipment and adequate size and that it would be a benefit for the comfort and extension of services to the local population and the immediate surroundings.

It is necessary to monitor the possibilities of benefiting from European funding and, if necessary, to adjust the construction programme to the optimum estimated amount

⁵ <https://www.mvcr.cz/>

⁶ <https://www.mvcr.cz/>

⁷ Department of Education, Culture, and Sport of the City of Krnov

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¹⁰ Department of Education, Culture, and Sport of the City of Krnov

CONNECTIONS TO THE TRAFFIC AND TECHNICAL INFRASTRUCTURE

PUBLIC TRANSPORT

The connection with the surrounding towns is well provided by the railway connection. From the Krnov railway junction it is possible to directly reach Albrechtice, Opava and Ostrava, or Bruntál. The walking distance to the Krnov railway station is about 1.3 km, to the Cvilín railway station about 1.2 km. Within a 15-minute drive there are towns and villages with a total population of about 12,000. This increases the population in the catchment area to a total of 35,000. There are a further potential 130,000 visitors within a 45-minute driving distance, including cross-border visitors from Poland.

Good transport links and a high population in the catchment area are a prerequisite for regular visitors.

The area of the existing outdoor swimming pool is not directly connected to public transport. The nearest public transport bus stops are within 500 m walking distance – Nemocnice – hl. brána in I. P. Pavlova street, or U stadiónů stop in Petrovická street. Public transport also provides transport among the train stations Krnov, Železný st., and Cvilín. The current vision is to place a bus stop at the main entrance to the spa building.

CONNECTION TO ROADS

Access to the site and the new parking lot are designed from the extended two-lane Petrovická street, which is directly connected to the Krnov bypass and heads to the border with Poland, or via the bridge in Karáskova street. It is possible to leave a single-lane road along the embankment for transport service, or to add a cycle path or a cycle route with mixed traffic for pedestrians and cyclists. This is a very problematic location and should therefore be given special attention in the design.

Pedestrian access from the West is from the bridge in Karáskova street, and access from the East is from the bridge in Petrovická Street.

The land for the future site is easily visible from Petrovická street, which is connected to the Northern bypass of the city and continues further North to Poland.

According to the Northern bypass project, a noise barrier wall (object C262) will be built on the right-hand side of the Northern bypass at km 3.605–4.110 and vegetation will be planted on land plot 1189/3 in the form of tree planting (C801). It is necessary to include the above information in the overall concept of the site and to coordinate both projects in time and in kind. A part of the New Municipal Spa is proposed in the area of the isolation green – this conflict must be discussed and a common solution found.

For better orientation of visitors from motorists, cyclists, and pedestrians it is advisable to consider creating a unified orientation and navigation system. The New Municipal Spa itself and its attractions, especially the water slides, will contribute to its visibility, especially from Petrovická street and the Northern bypass.

STATIONARY TRAFFIC

There is currently no adequate parking in the area and parking is provided on the ground directly at the embankment.

In the area between the site of the proposed New Municipal Spa and Petrovická street, a large-capacity parking lot for about 160 cars and a minimum of 3 buses is designed. This capacity will accommodate both the proposed New Municipal Spa and the adjacent outdoor summer swimming pool.

Additional parking spaces for staff, disabled persons, or visitors with strollers will be located immediately adjacent to the entrance to the New Municipal Spa or at the entrance to the swimming pool area.

Requirements for parking spaces according to ČSN 73 6110 for the New Municipal Spa:

Population of Krnov: 24 175
Number of registered vehicles: 7945
Passenger vehicles per 1,000 people: 329
Coefficient of effect of car ownership: 0.82 (normally 1)
Connection frequency coefficient: 1
Walking distance: 500 m

(U Stadionu stop; 840 m Nemocnice, hl. brána stop)
Accessibility index: 1
Level of accessibility: 1
Parking site reduction coefficient: 1
Type of construction: swimming pool
Purpose unit: visitors – maximum of 700

(according to the average time spent at the pool, a coefficient of 0.5 = 350)

Number of special purpose units per 1 parking space: 4 (4–8)
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Table 34 – Recommended basic indicators for the prospective number of stalls and parking spaces

Total number of parking spaces for the swimming pool: 72
In addition, 3x parking for the bus

Requirements for parking spaces according to ČSN 73 6110 for outdoor swimming pools:

Population of Krnov: 24 175
Number of registered vehicles: 7945
Passenger vehicles per 1,000 people: 329
Coefficient of effect of car ownership: 0.82 (normally 1)
Connection frequency coefficient: 1
Walking distance: 500 m

(U Stadionu stop; 840 m Nemocnice, hl. brána stop)
Accessibility index: 1
Level of accessibility: 1
Parking site reduction coefficient: 1
Type of construction: swimming pool
Purpose unit: visitors – maximum of 2,000 according to the designed capacity of the swimming pool (according to the information of Ing. Snášel from this year's 2018 season – 4 days at the opening of the operation in August, the daily visitor capacity was approx. 2,500 – from August 3 to August 31, visitor capacity was 25,725, according to the average time spent at the swimming pool, the coefficient is 0.5 = 1000).
Number of special purpose units per 1 parking space: 4 (4–8)

Table 34 – Recommended basic indicators for the prospective number of stalls and parking spaces.

Total number of parking spaces required for the swimming pool: 125–250

CONCLUSION:

Considering the overlapping operation of the swimming pool and the New Municipal Spa, the seasonal use of the swimming pool, the weather effects and the empirical estimate of the time spent at the outdoor swimming pool and the indoor pool, we propose a common parking lot for both neighbouring areas with a capacity of approx. 160 parking spaces + 3 buses. In addition, we recommend that at least additional 30 parking spaces be proposed for employees of both facilities and parking for persons with reduced mobility and orientation.

In emergency peak periods, the existing parking lot at the ice rink (walking distance 500 m), in the adjacent housing estates, and possibly reinforced public transport to the pool during summer months during operating hours, can be used.

Note: in the next stages of the PD the number of parking spaces will be updated according to the final proposed capacities.

It is advisable to locate the parking lot in a rich, grown green space, which will help to provide a suitable microclimate, shade vehicles and integrate the extensive paved areas into the surrounding area.

Stormwater from the parking lot treated through an oil separator will discharge to the Opavice River further downstream behind the Petrovická street outside the level 2 protective zone (intake area Zlatá Opavice). Location of the light liquid separator is considered under the parking lot area. Stormwater from roofs and paved areas on the site will be absorbed on the property with additional controlled retention. Part of this water will be used to the maximum extent possible as utility water for watering the greenery on the site and as utility water for toilets, etc.

BICYCLE TRANSPORT

The regional cycling route No. 55 Silesian Route connecting Opava and the town of Albrechtice runs along the Opavice River.

It is necessary to provide sufficient areas for bicycle racks, including bicycle boxes, especially near the entrances to the swimming pool and the New Municipal Spa.

STORMWATER MANAGEMENT

The conditions for the disposal of stormwater are specified in the general measure No. KRNOZP-89489/2020 MIKL dated 17 September 2020. Drainage of stormwater from impermeable surfaces (roofs, paved surfaces) is not allowed, stormwater will be discharged outside the protective zone of the water source Zlatá Opavice (if part of it is collected and used as utility water, it will become wastewater and will be discharged outside the protective zone).

SANITARY SEWER SYSTEM

A new sewer connection must be built for the New Municipal Spa. This is subject to the construction of a sewer according to the Local Plan. This sewer will be connected to the existing sewer in Hřbitovní street.

This solution was discussed at a work meeting at the Water and Sewerage Board in Krnov on 20 March 2019 and was judged to be more conceptual compared to the problematic connection along Petrovická street.

The section up to the pumping station will be gravitational, and pressurized from the pumping station at the crossing with the Opavice River and further on in the necessary length according to the elevation conditions.

Land affected by sewerage: 1185/1 (own pool), 1189/1, 1189/2, 1224/9 (Petrovická street), 1224/10, 1228/3, 1228/2 (CS), 5792 (the Opavice River), 421, 425, 5790/1 (CS) 435/1 (connection to the existing sewer).

ELECTRIC POWER CONNECTION

The proposed area can be connected by a new MV connection to a new transformer substation (TS), which will be built into the building of the New Municipal Spa. The connection will be made by coupling from the ČEZ MV distribution grid at the existing substation near the outdoor swimming pool. The MV connection and the route of the MV connection is on plot No. 1185/1 and

crosses over to plot No. 1189/5 (new TS in the swimming pool building).

The preliminary annual electricity demand will be specified after the final capacities of the New Municipal Spa and the final overall energy solution are determined in the next stages of the PD. ČEZ has not yet reserved the power supply, it is necessary to secure the reservation of the required power supply with ČEZ in advance (ex. ČEZ No. 4121479860). The project documentation, securing the relevant permits and the connection implementation is a task of the electricity supplier on the basis of a contract with the investor.

NATURAL GAS CONNECTION

In order to connect the New Municipal Spa, it is necessary to extend the STL PEO DN 63 gas pipeline 234 m from Petrovická street near the football stadium, where the existing gas pipeline STL DN 200 Oc. (GASNET). According to the statement No. 4000220864, the pool can be further connected with the STL PEO DN 32 connection in the length of approx. 78 m.

CONNECTION TO “CENTRAL HEAT SUPPLY”

According to the statement of Veolia Energie ČR, a.s. RSMSS/20181120-008TI, the planned New Municipal Spa can be connected to their distribution facilities by a steam connection or a hot water connection.

The connection points and possible routes are indicated in the above-mentioned statement. The connection to the approx. 800 m long steam pipeline would be on the premises of the Krnov hospital and would end in the vicinity of the existing substation West of the swimming pool. The approx. 260 m long connection to the heating pipeline starts at the apartment buildings on Seifertova street and ends also at the existing substation. The own connection to the building of the proposed Municipal Spa of approx. 280 m would run in parallel with the MV connection, depending on the urban design of the swimming pool and the new facility.

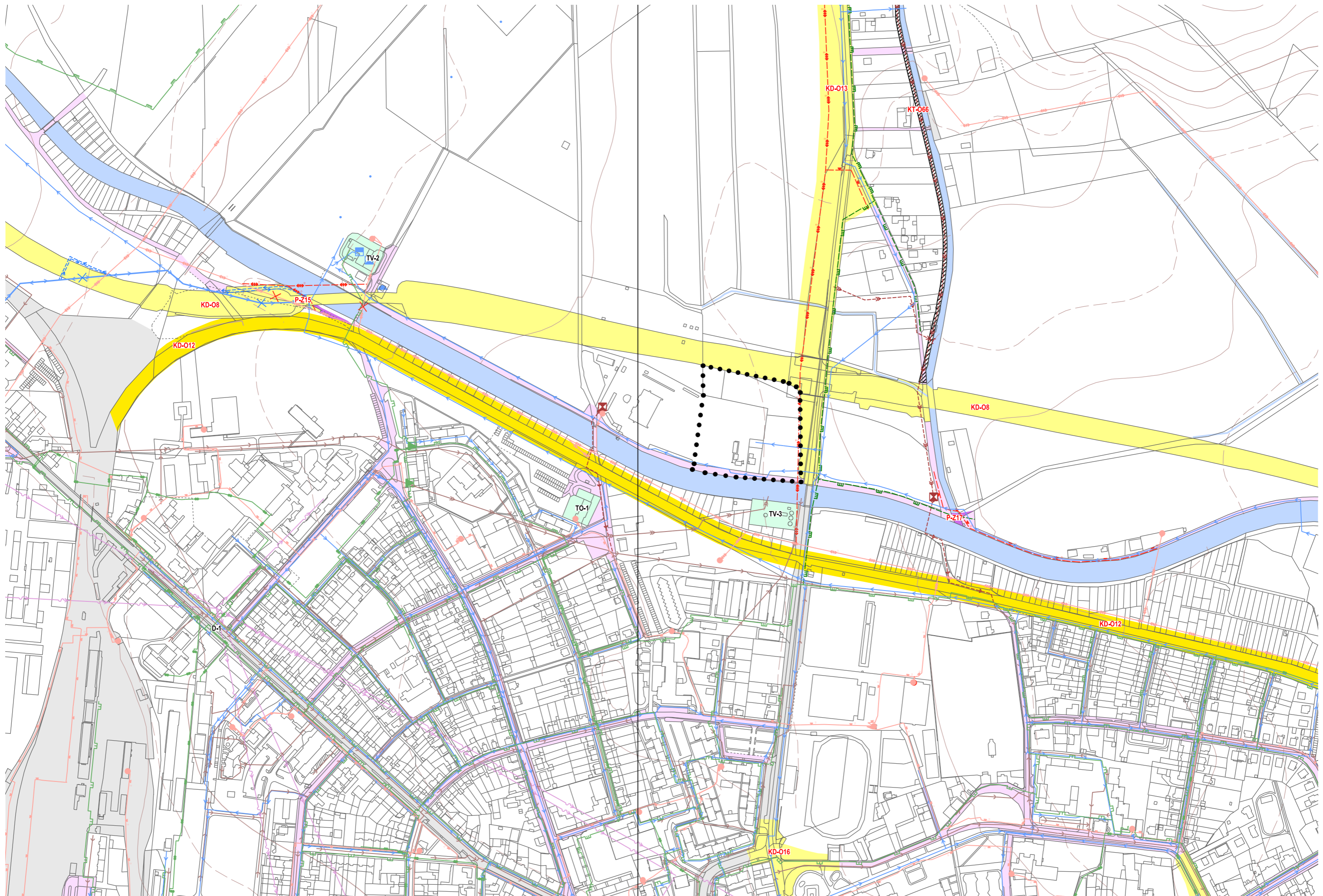
CONCLUSION:

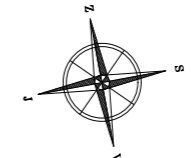
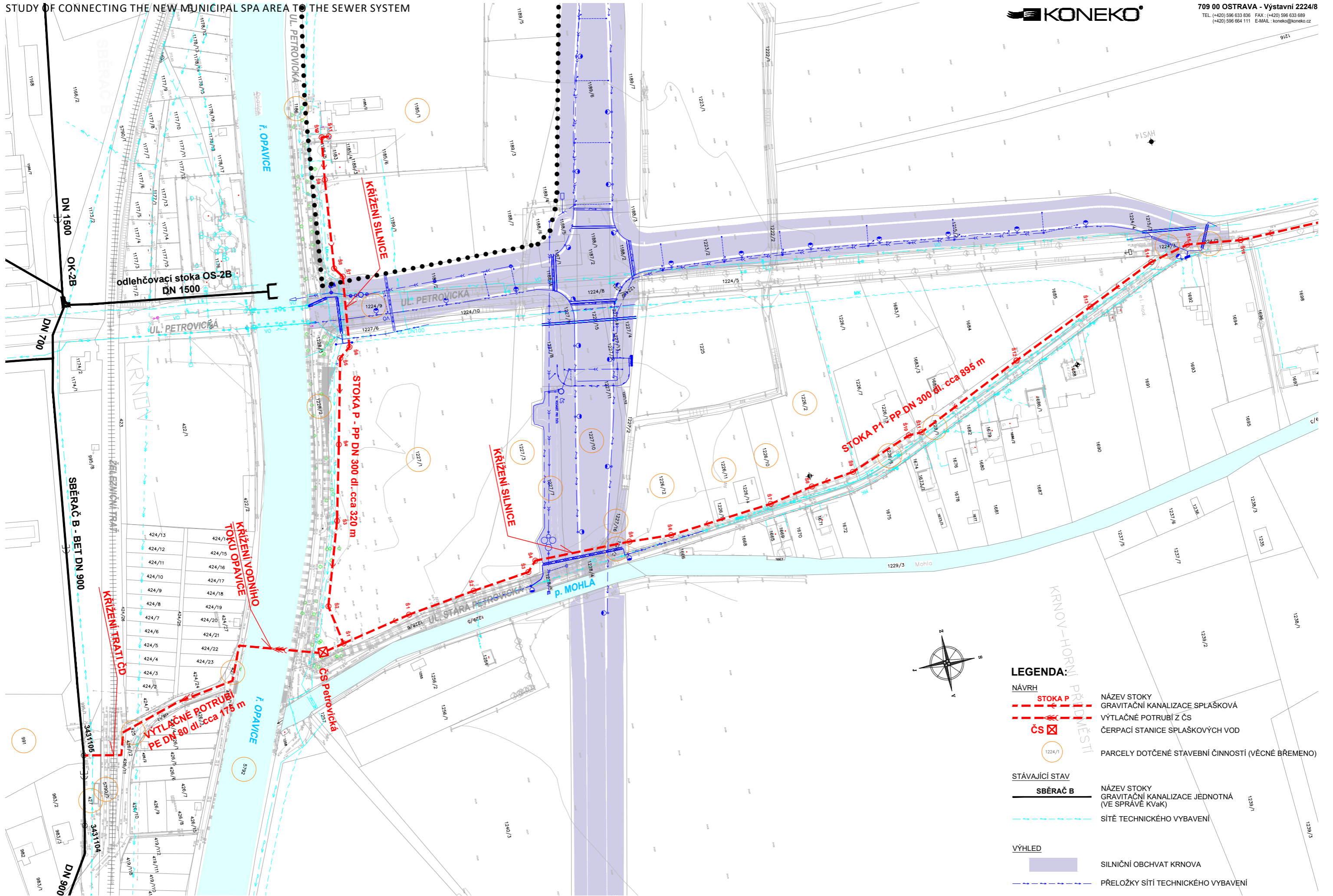
The specific energy coverage of the building will be the subject of further stages of the PD after consideration of technical and economic aspects according to the development of energy prices, energy concept of the city, and other documents.

At this stage, the simplest solution and the most advantageous one seems to be the connection to natural gas, especially because of the possibility of cogeneration with the use of waste heat for the New Municipal Spa and the possibility of partial coverage of the electricity demand. A risk factor for this solution is the expected tightening of emission limits for new pollution sources.

The resulting energy solution will also be a suitable combination with other possible sources: such as heat pumps, photovoltaics, heat recuperation from HVAC, waste heat recovery, etc.

The project documentation, securing the relevant permits and the connection implementation is a task of the heat supplier on the basis of a contract with the investor.



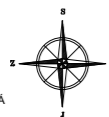


LEGENDA:

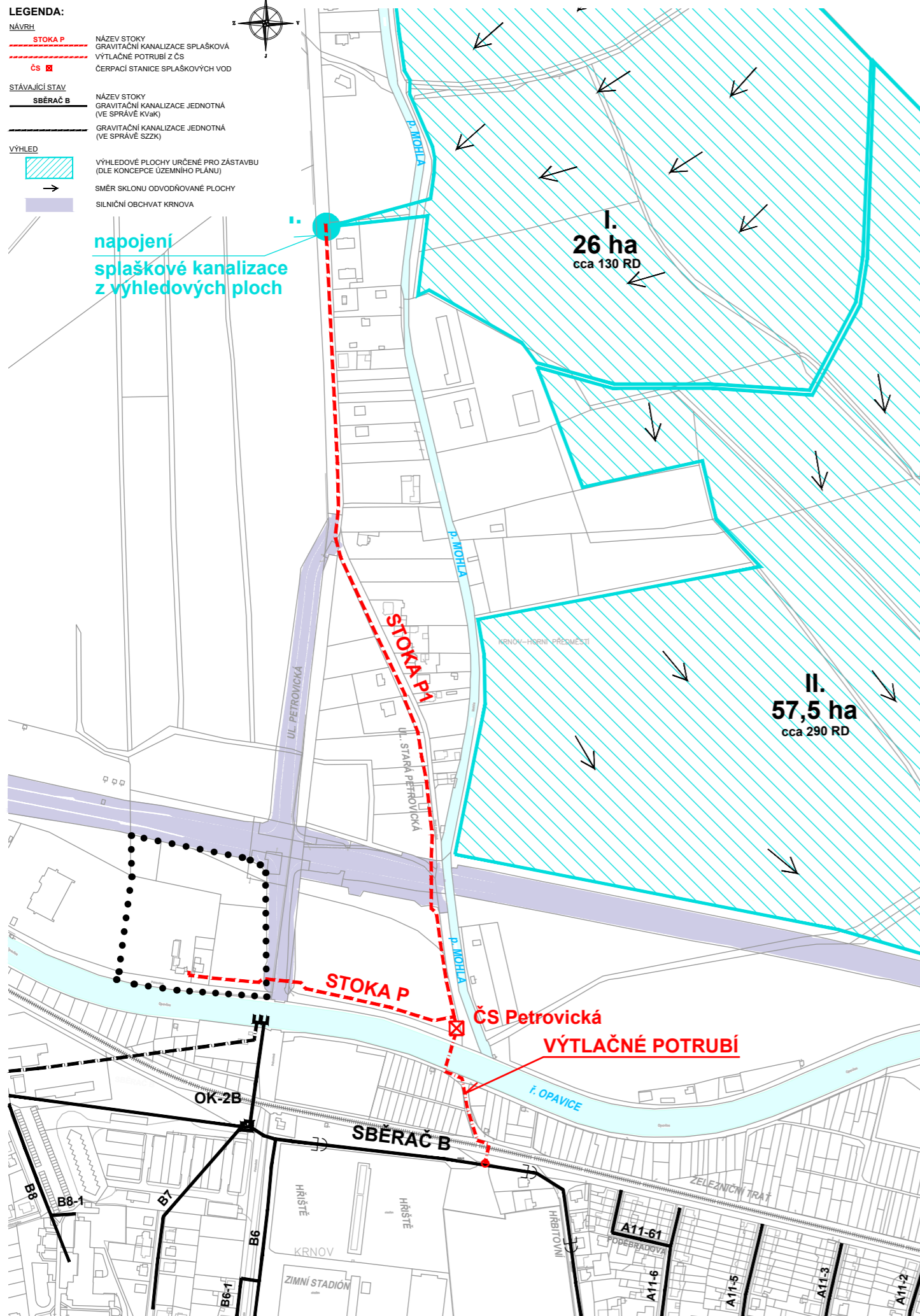
NÁVRH		
	STOKA P	NÁZEV STOKY
	ČS	GRAVITAČNÍ KANALIZACE SPLAŠKOVÁ
		VÝTLAČNÉ POTRUBÍ Z ČS
		ČERPAČÍ STANICE SPLAŠKOVÝCH VOD
		PARCELY DOTČENÉ STAVEBNÍ ČINNOSTÍ (VĚCNÉ BŘEMENO)
STÁVAJÍCÍ STAV		
	SBĚRAČ B	NÁZEV STOKY
		GRAVITAČNÍ KANALIZACE JEDNOTNÁ (VE SPRÁVĚ KVAK)
		SÍTĚ TECHNICKÉHO VYBAVENÍ
VÝHLED		
		SILNIČNÍ OBCHVAT KRNOVA
		PŘELOŽKY SÍTĚ TECHNICKÉHO VYBAVENÍ

LEGENDA:

- NÁVRH**
- STOKA P** NÁZEV STOKY GRAVITAČNÍ KANALIZACE SPLAŠKOVÁ VÝTLAČNÉ POTRUBÍ Z ČS ČERPAČÍ STANICE SPLAŠKOVÝCH VOD
- STÁVAJÍCÍ STAV**
- SBĚRAČ B** NÁZEV STOKY GRAVITAČNÍ KANALIZACE JEDNOTNÁ (VE SPRÁVĚ KVAK) GRAVITAČNÍ KANALIZACE JEDNOTNÁ (VE SPRÁVĚ SZSK)
- VÝHLED**
- VÝHLEDOVÉ PLOCHY URČENÉ PRO ZÁSTAVBU (DLE KONCEPCE ÚZEMNÍHO PLÁNU)
 - SMĚR SKLONU ODVODŇOVANÉ PLOCHY
 - SILNIČNÍ OBCHVAT KRNOVA



napojení
splaškové kanalizace
z vyhledových ploch



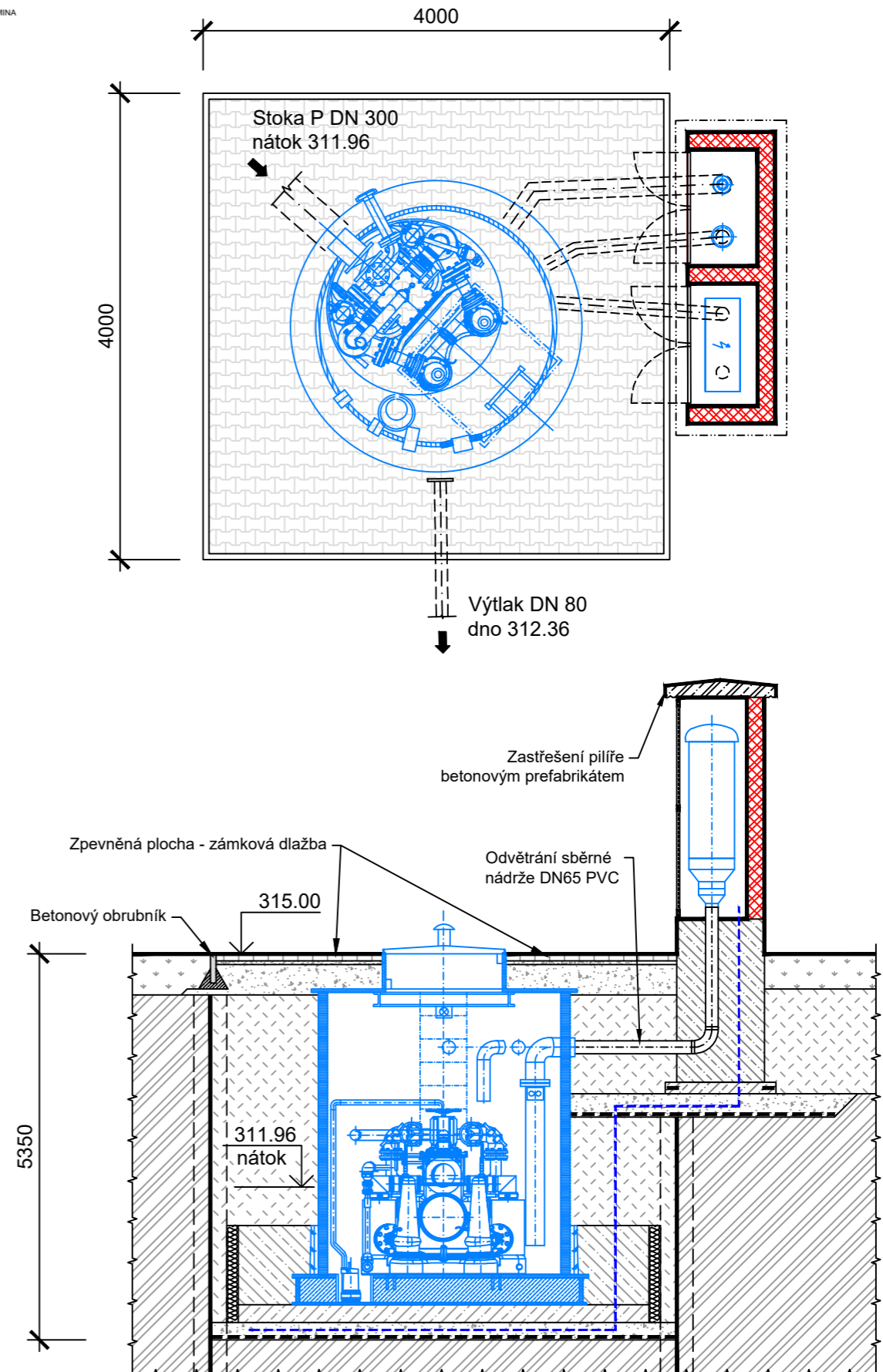
STUDY OF CONNECTING THE NEW MUNICIPAL SPA AREA TO THE SEWER SYSTEM – CONSTRUCTION COORDINATION SITUATION

LEGENDA MATERIÁLU

- PROSTÝ BETON
- PROSTÝ BETON - ČSN EN 206-1-C 20/25 (ZÁKLAD PILÍŘE, PODKLADNÍ BETON) (PŘÍTLUČNÍ PRSTENEC)
- CIHLA BÍLÁ, II. 150 mm
- BETONOVÁ DLAŽBA
- ZÁSYP JÁMY HTNĚNÝ VE VRSTVÁCH max 300 mm, - 50 % vhodná tlidná zemina z výkopu, - 50 % nesoudržná zemina G1, šterkodř (fr. 32 - 63)
- PODSYP ŠTĚRKEM (frakce 8 - 32 mm) HTNĚNÝ VE VRSTVÁCH 100 mm, min. hodnota říz. modulu deformace Mvd1 = 40 MPa
- ROSTLÁ ZEMINA



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WASTEWATER PUMPING STATION – ČS PETROVICKÁ – FLOOR PLAN AND CROSS SECTION

RELATED AND CONDITIONAL INVESTMENTS

The basic proposed object is the building of the New Municipal Spa including outdoor sports and relaxation facilities (swimming pool, external Sauna World, paved areas, and related landscaping).

Its construction is subject to other conditional investments.

- Access road
- Parking lot
- Water supply connection
- Sewage connection
- Stormwater disposal
- Connection to telecommunication network
- Public lighting
- Connection to energy for heat generation – gas pipeline, alternatively heat pipeline or steam pipeline

(Details in previous chapters)

Residential House

On the land plots No. 1183, 1185/3, 1185/4, 1185/5, and 1185/6 in the cadastral area Krnov – Horní Předměstí

Until the completion of the feasibility study (2019), no agreement has been reached on the possible purchase of these properties with their owners. Therefore, the study assumes their preservation.

In the event that a mutual agreement is subsequently reached, the option of demolishing the buildings in question and optimising the situational solution of the entire project will be assessed.

The competition proposals will therefore assess the possibility of connecting the New Municipal Spa with the possible construction of a hotel on the site of the current family house. The hotel itself would be designed in terms of volume and location; it is important to resolve the operational and structural connection between the hotel and the spa. The competition proposals would therefore work both with and without the hotel option.

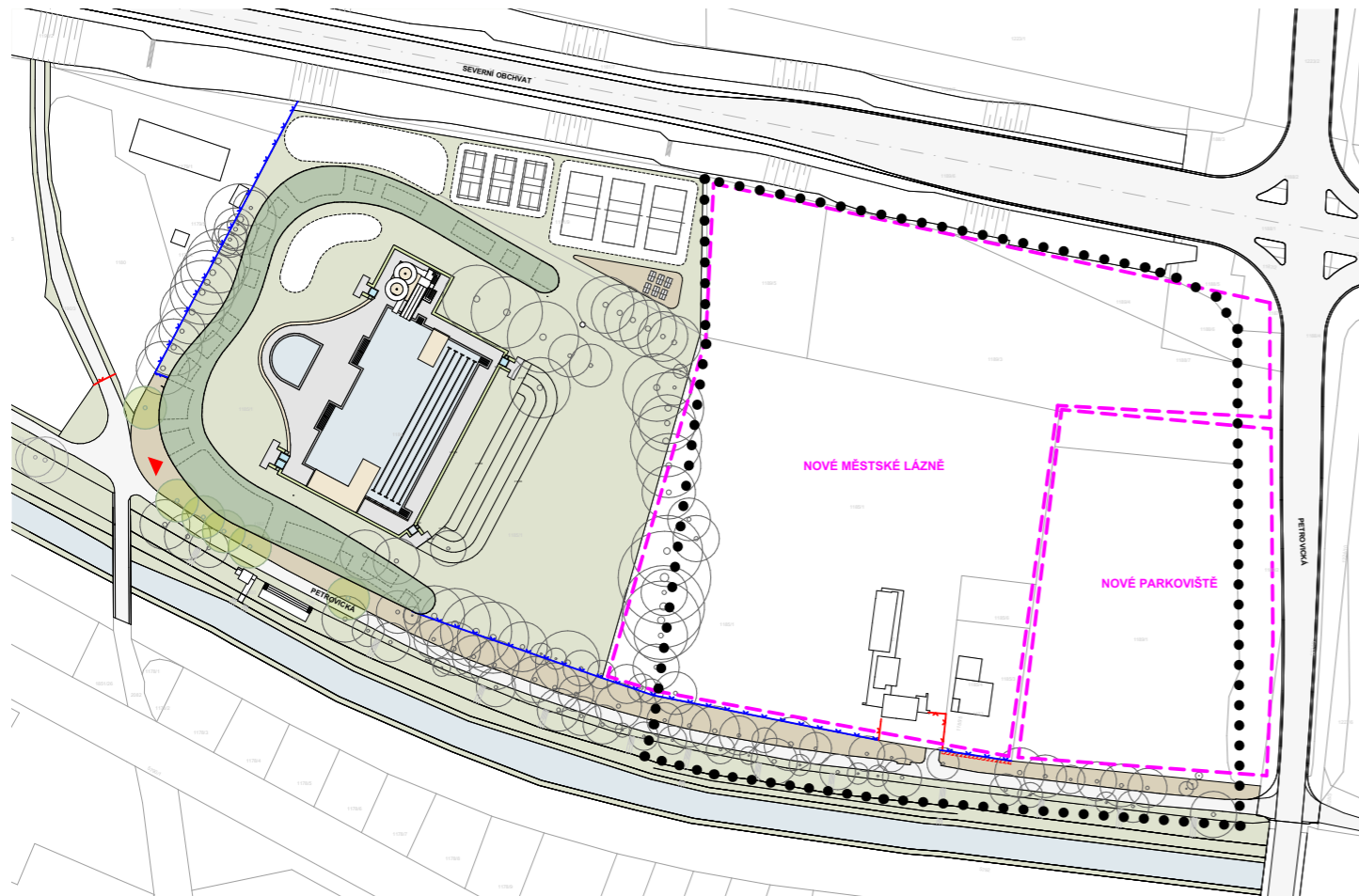
Conditional Investments

Northern bypass of the city – it is necessary to coordinate both plans at the time of the bypass implementation and to solve spatial conflicts (partial location of the spa in the area of isolation greenery planting).

Outdoor swimming pool – reconstruction, modernisation, and extension, separation and purposeful connection of both areas, MV connection through the swimming pool, shared parking lot.

The feasibility study was prepared by Ing. arch. Václav Cviček in September 2019

COMPLETION OF THE OUTDOOR SWIMMING POOL IN KRNOV – PROJEKTIL ARCHITEKTI S.R.O.



ECONOMICS OF CONSTRUCTION AND OPERATION

OPERATING COSTS

The total estimated annual operating costs are indicative only and are taken from a previous study, based on the volume parameters chosen. They are presented below for overall clarity and relevance of the operating cost aspects and are subject to change depending on the actual proposed capacity and the range of attractions and activities. The modelling of operating costs carried out concludes as follows:

Total projected annual operating costs amount to CZK 23,400 million

Of which:

Wage costs including deductions	56 %	CZK 13,104 million
Electricity	15 %	CZK 3,510 million
Heat (natural gas)	7 %	CZK 1,638 million
Water (water and sewerage)	5 %	CZK 1,170 million
Other costs	17 %	CZK 3,978 million

These costs should only be taken as indicative as they will evolve over time.

The estimated investment costs for construction in 2017 were approx. CZK 225 million without VAT (according to the financing approved by Resolution No. 586/22/RM/2017 by the Krnov City Council on 1 November 2017). Taking into account the development of prices of materials and construction works, the current estimate of the investment is at the maximum of CZK 380 million without VAT.

ELECTRICITY

An important fact in the design of the New Municipal Spa is the emphasis on the energy efficiency of the building, especially on electricity consumption. Here, it is possible to use cogeneration (generation of electricity and heat by burning natural gas) and photovoltaics to reduce consumption or as a partial substitute for the main source.

HEAT GENERATION

Technically and investment-wise, it seems to be the simplest to equip the building with gas boilers only – but this option is not so economical operationally. It is far more cost-effective to design the entire energy block in combination with other sources – either CHP units or in combination with heat pumps, photovoltaics, heat recovery, etc.

From the ecological and economic perspective, the possibility of supplying heat (heat pipeline, steam pipeline) from central sources (Veolia Energie ČR, a.s.) will also be examined.

The need for energy depends, among other things, on the technology of the pools, the size of the operation and the efficient use of space. Costs are characterised by seasonal variations and these factors need to be taken into account when drawing up annual budgets.

WATER AND SEWAGE CHARGES

A significant cost adversely affecting the management of swimming facilities is certainly the source of cheap own water with the possibility of discharge outside the main sewer line. One possible cost-saving option is the acquisition of a water treatment plant for the water from its own well.

OTHER COSTS

Other items fluctuate in cost according to inflation or price increases from suppliers. It is necessary to apply water saving technologies such as cogeneration units, heat recovery units, dual use of water for pool showers and look for opportunities to save on sewer charges.

MAINTENANCE AND SHUTDOWNS

The choice of pool surface material will affect the number of operating days of the Municipal Spa within a calendar year. Indoor pools made of ceramic surfaces must be taken out of service once per year for a minimum of 10–15 days for construction work. The 10–15 day period is a minimum period due to compliance with construction procedures for ceramic tile repairs. Most indoor swimming pools with ceramic surfaces are shut down during the summer holidays when some of the staff is deployed to outdoor swimming pools. However, in the event of bad weather, there are no swimming facilities in the area during the desired school holidays. These facilities then often lose clientele to more distant competitors who operate year-round because of better pool surface materials. Draining and filling 1,000 m³ costs CZK 90,000 per year on average.

Statistics confirm that visitor numbers in the sports services have been increasing since 1996, which provides a good indication for further investment in these services.

INDICATIVE SUBDIVISION INTO CONSTRUCTION OBJECTS

SO-01 Preparation of the site, demolitions

SO-02 Municipal Spa

SO-03 Roads and pavements

SO-04 Water connection

SO-05 Sewage system

SP-06 Stormwater drainage and disposal

SO-07 Gas pipeline and gas connection

SO-08 Outdoor lighting

SO-09 Low current connection

SO-10 MV connection, transformer station

SO-11 CHP connection

SO-12 Landscaping

This subdivision will be specified in the next phase of pre-design and design preparation.

The separate operating sets will include individual technological units.

ESTIMATED TIMETABLE

2021	Architectural competition
2022–2024	Design works (DÚR, DSP, DPS)
2024–2025	Selection of contractor, start of construction
2027–2028	Completion of construction

