



SMART WATER MANAGEMENT SOLUTIONS IN PREMIUM SHOPPING CENTRES

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UNIBAIL-RODAMCO-WESTFIELD

Our Group

We own, develop and operate **shopping centres and airport retail operations** across Europe and the United States

We generate value through **operational excellence** and our ideal position as a **unique platform** for local and international retailers and brand ventures

We build, operate and maintain **state-of-the-art office buildings and convention & exhibition centres** in the Paris region

92
SHOPPING CENTRES
55
FLAGSHIPS



2
CONTINENTS
12
COUNTRIES

STATE-OF-THE-ART
OFFICE
BUILDINGS



6
AIRPORT
RETAIL OPERATIONS



1.2BN
ANNUAL VISITS

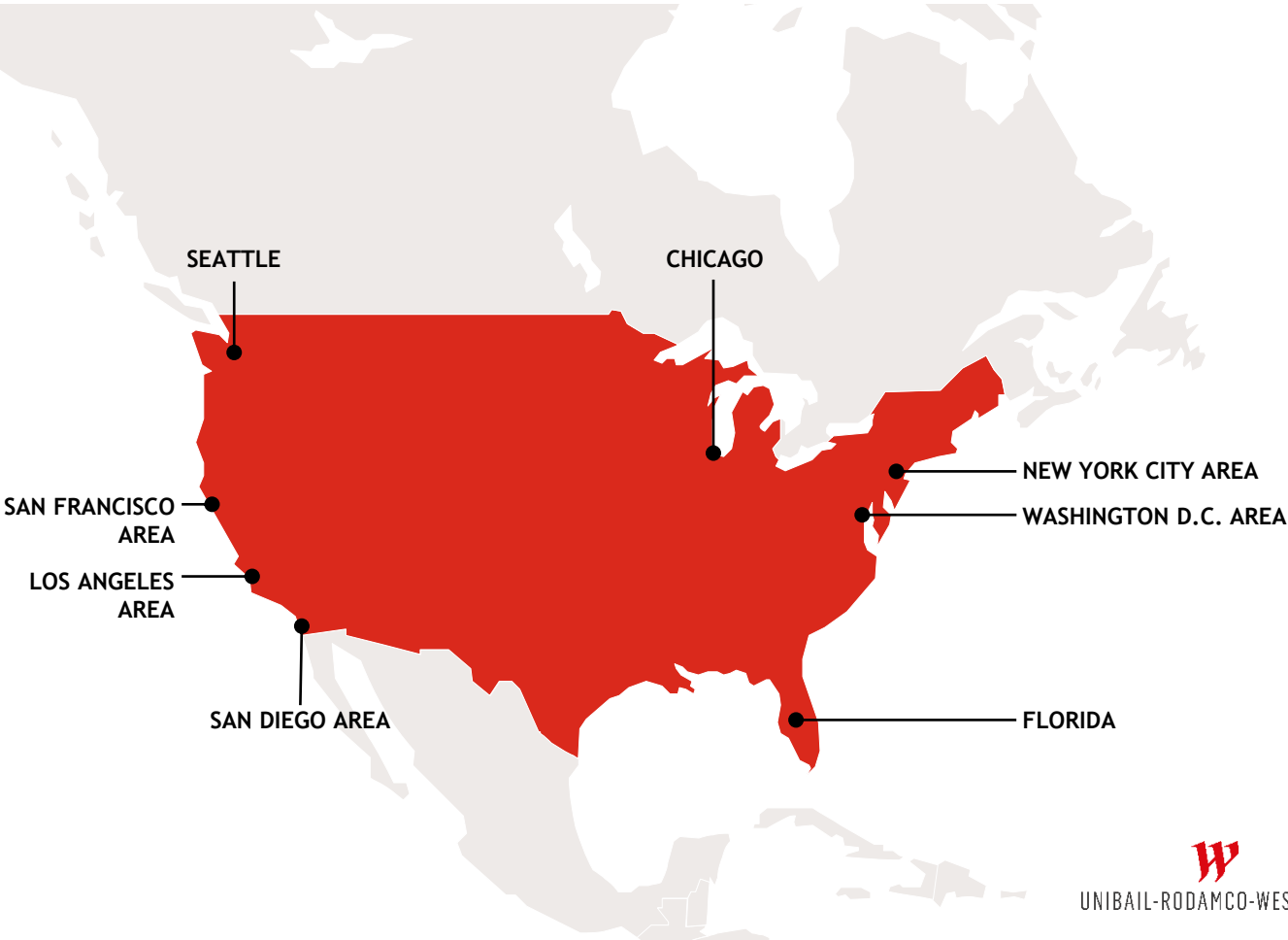
MAJOR
CONVENTION
& EXHIBITION
CENTRES
IN THE PARIS
REGION



Our presence

Located in the most desirable catchment areas
in Europe and the United States

● Currently ● Coming soon

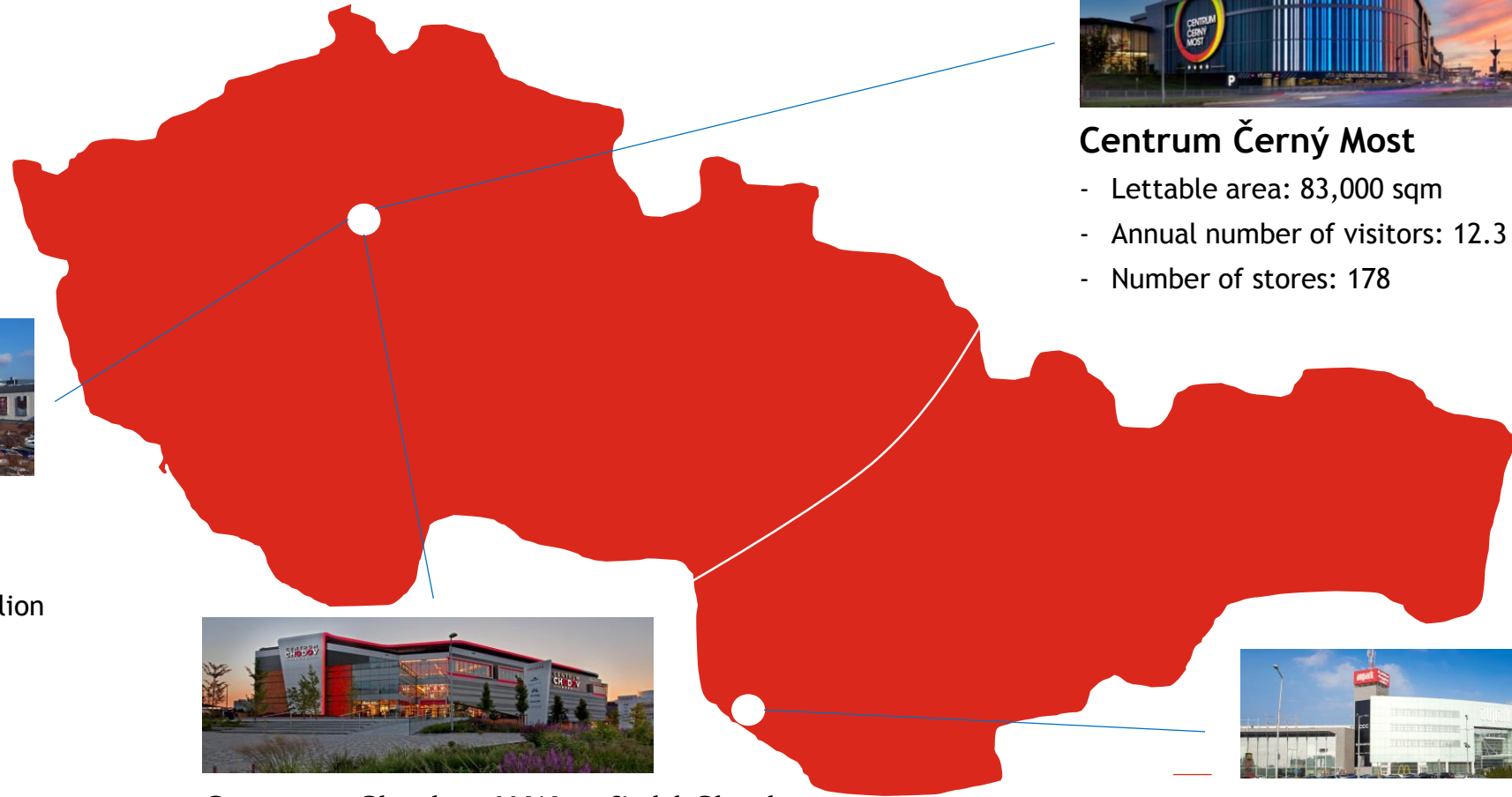


Our Czech and Slovak portfolio



Metropole Zličín

- Lettable area: 49,000 sqm
- Annual number of visitors: 8.4 million
- Number of stores: 125



Centrum Černý Most

- Lettable area: 83,000 sqm
- Annual number of visitors: 12.3 million
- Number of stores: 178



Centrum Chodov // Westfield Chodov

- Lettable area: 95,000 sqm
- Annual number of visitors: 18.7 million
- Number of stores: 301



Aupark Bratislava

- Lettable area: 49,000 sqm
- Annual number of visitors: 11.8 million
- Number of stores: 220

Our CSR strategy

BETTER PLACES 2030

REINVENTING PLACES TOGETHER FOR A BETTER TOMORROW

We implement an ambitious corporate social responsibility strategy to address the main challenges facing commercial real estate

BETTER SPACES

Moving towards a low-carbon economy and sustainable mobility

-50%

carbon emissions across our value chain by 2030

BETTER COMMUNITIES

Fully integrating business activities within local communities

100%

of owned & managed assets with a community resilience action plan by 2020

BETTER TOGETHER

Empowering teams on sustainability and diversity

100%

Group employees with yearly individual CSR objectives by 2020



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WATER MANAGEMENT SOLUTIONS IN URW



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BREEAM CERTIFICATION

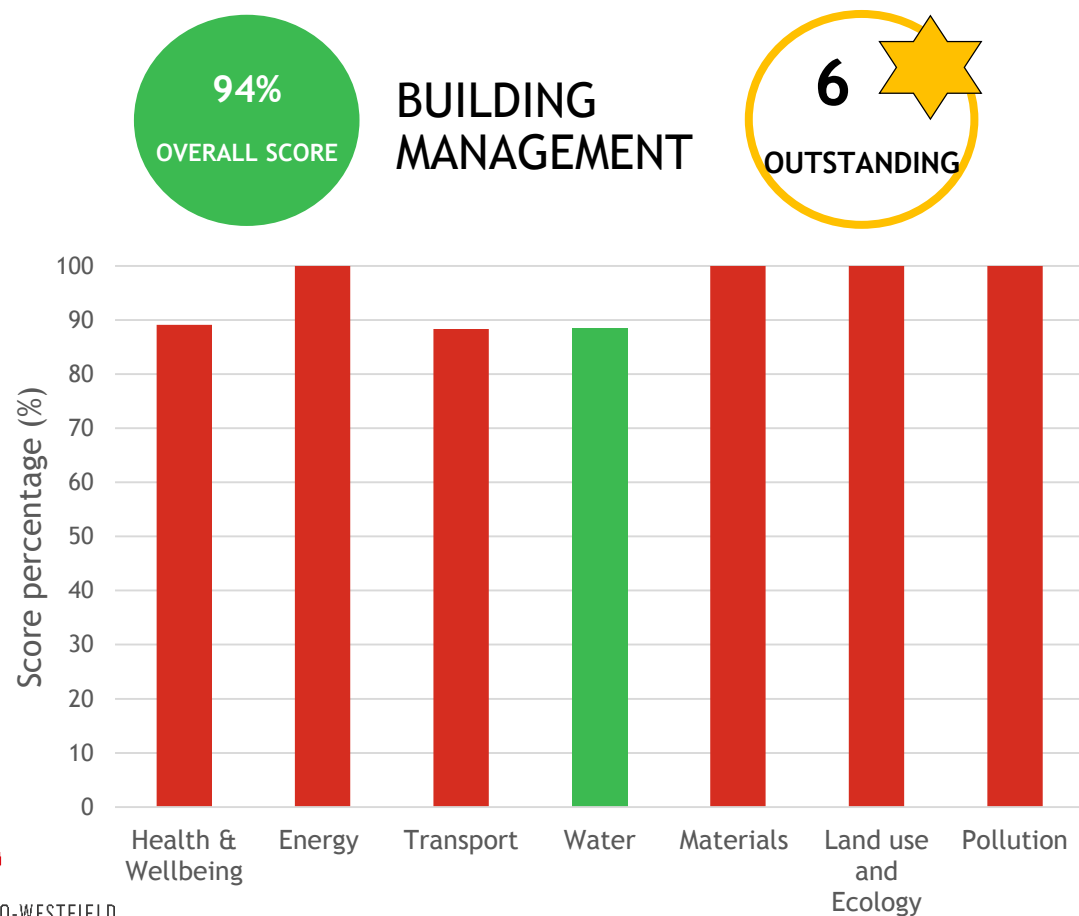
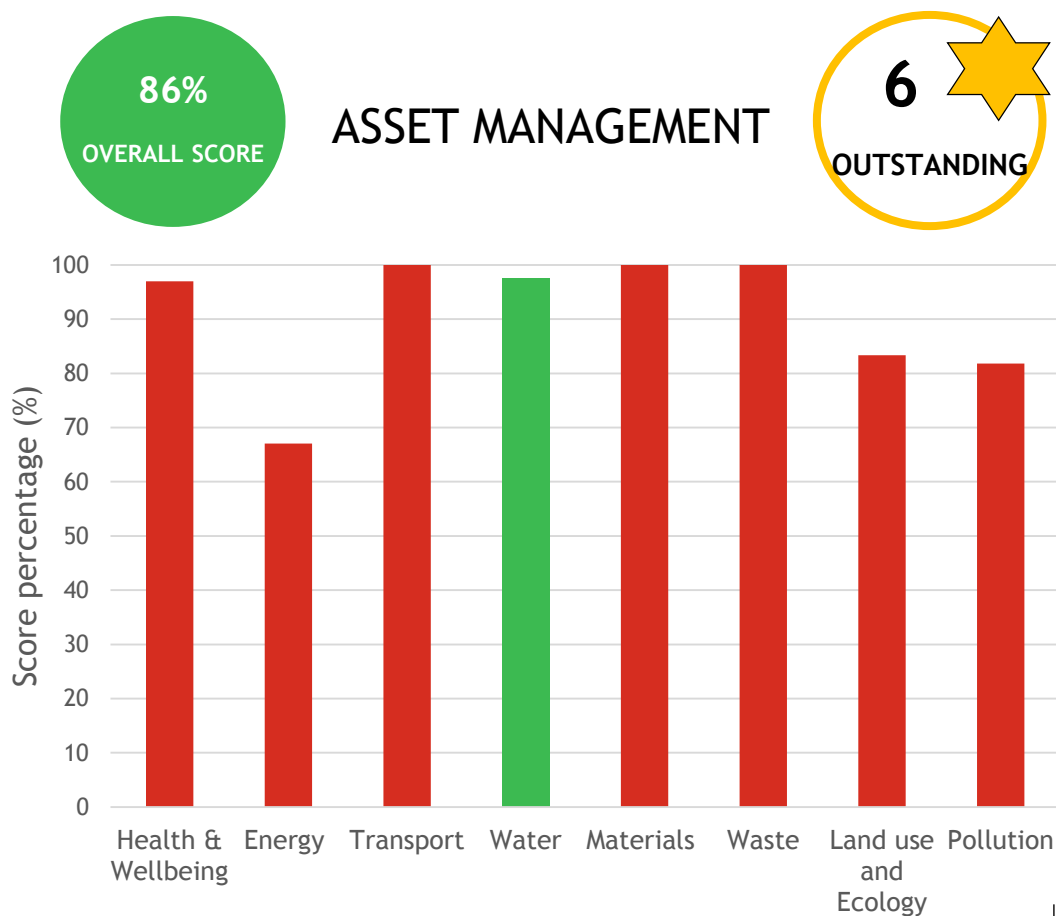
BREEAM in use: High international standard assessment and certification scheme designed to help building managers reduce and improve the environmental performance of existing buildings.

Shopping centre	Building management (part 2) score	Next certification year
Centrum Chodov	Outstanding	2021
Centrum Cerny Most	Excellent	2020
Aupark	Excellent	2020
Metropole Zlicin	NA	After extension



BREEAM CERTIFICATION - Example of CENTRUM CHODOV

- Centrum Chodov performed an “Outstanding” score in its last BREEAM in USE certification in both evaluations « Asset » (technical aspects of the building) and « Building management » (Property management).
- Both evaluations include a large chapter of test and proofing focused on water management.



BREEAM CERTIFICATION - Example of CENTRUM CHODOV

Example of items declared and proved by tests for BREEAM in USE:

- All water taps are preadjusted to max consumption 10s/0,9l (PIR controlled, video test managed)
- All urinals are adjusted to max consumption 1,2l per flush
- All cabin toilets are pre adjusted to max consumption 4,5l per big flush/3l small flush
- Low-water shower heads (max 6l/min)
- Professional dishwasher for the foodcourt (max consumption 7l/per rack of dishes)
- Automatic leak detection system across the pipe system at numerous strategic points.

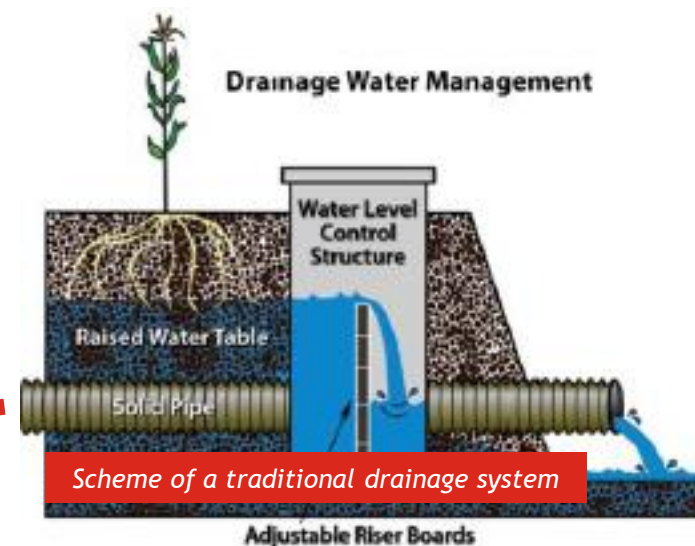


Automated leak detection system

- Automatic leak detection system functioning: Management team adjusted max consumptions at certain times (for e.g. over the nights) and if there is some overconsumption, system sends an alarm message and the water supply is automatically closed

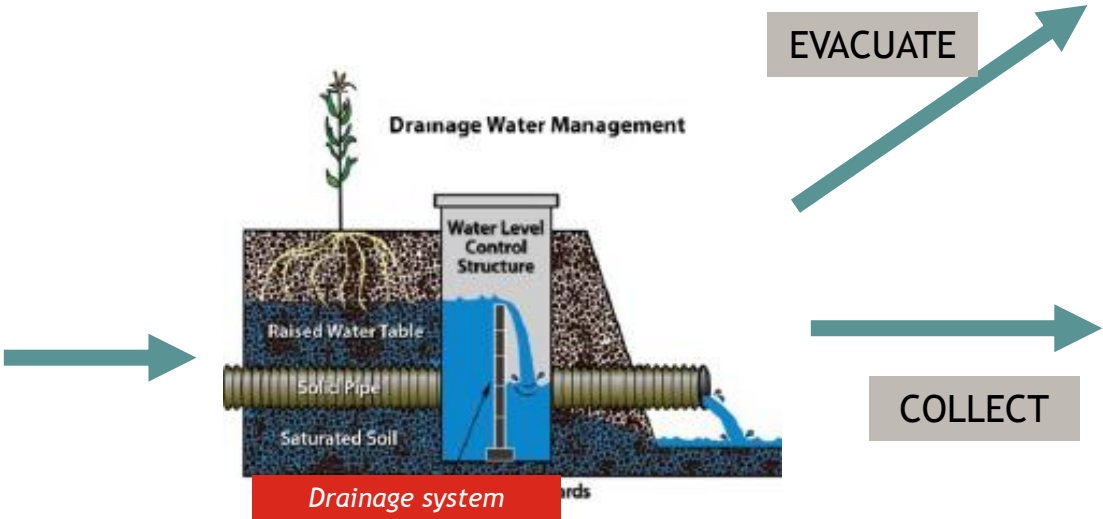
CENTRUM CHODOV - water management

- Centrum Chodov is saving water by using drainage water. The source of this drainage water is large enough to fulfill needs for the all toilet flush system of Chodov (saving approx. 12,200 m³ annually of drinkable water).
- Future plan is to use this source for the cooling system and additionally save 13,000 m³ of drinkable water
- Also linked to water management, we are decreasing the consumption of electricity via:
 - Using solar panels to pre-heat water for dish-washers
 - Using residual heat from cooling production to pre-heat hot sanitary water for technical facilities (since implementation in 2016, it has saved 170,000 kWh of energy)



Drainage is a natural or artificial removal of surface water and sub-surface water from an area with excess of water.

CENTRUM CHODOV - drainage system



PROCESS



STOCK

INSERT



CENTRUM CERNY MOST - water management

- Cerny Most is saving water from 3 different sources:
 - Grey water (or used water) collected from the toilets and rest rooms
 - Rain water collected from the roof. A smaller part is led through retention tanks back to a small water stream, called „Chvalka“.
 - Drainage water (called „dry polder“) in underground parkings coming from ice, snow brought by cars and rain waters.
- All of the water collected via these sources is processed in a treatment unit to be cleaned and reinserted in the flushing system of the toilets



Roof rain water collection system



Grey water collection system



Drainage water

CENTRUM CERNY MOST

Grey and rain water treatment



Fully automatic process to clean grey water:

- › Grey water is collected along with rain water in two, big water tanks.
- › The rain and grey water are then processed through the grey water treatment unit to be filtered, cleaned and pumped to a reservoir where it will be reinserted in the toilet flushing system.

AUPARK - water management



- In addition to its main source of water from water supply and treatment company BVS, Aupark is using water from 3 wells:
 - 2 used for watering greenery (saving since 2012 - 9,900m³)
 - 1 used for supply of cold water to cooling towers (saving since 2012 - 17,600m³)

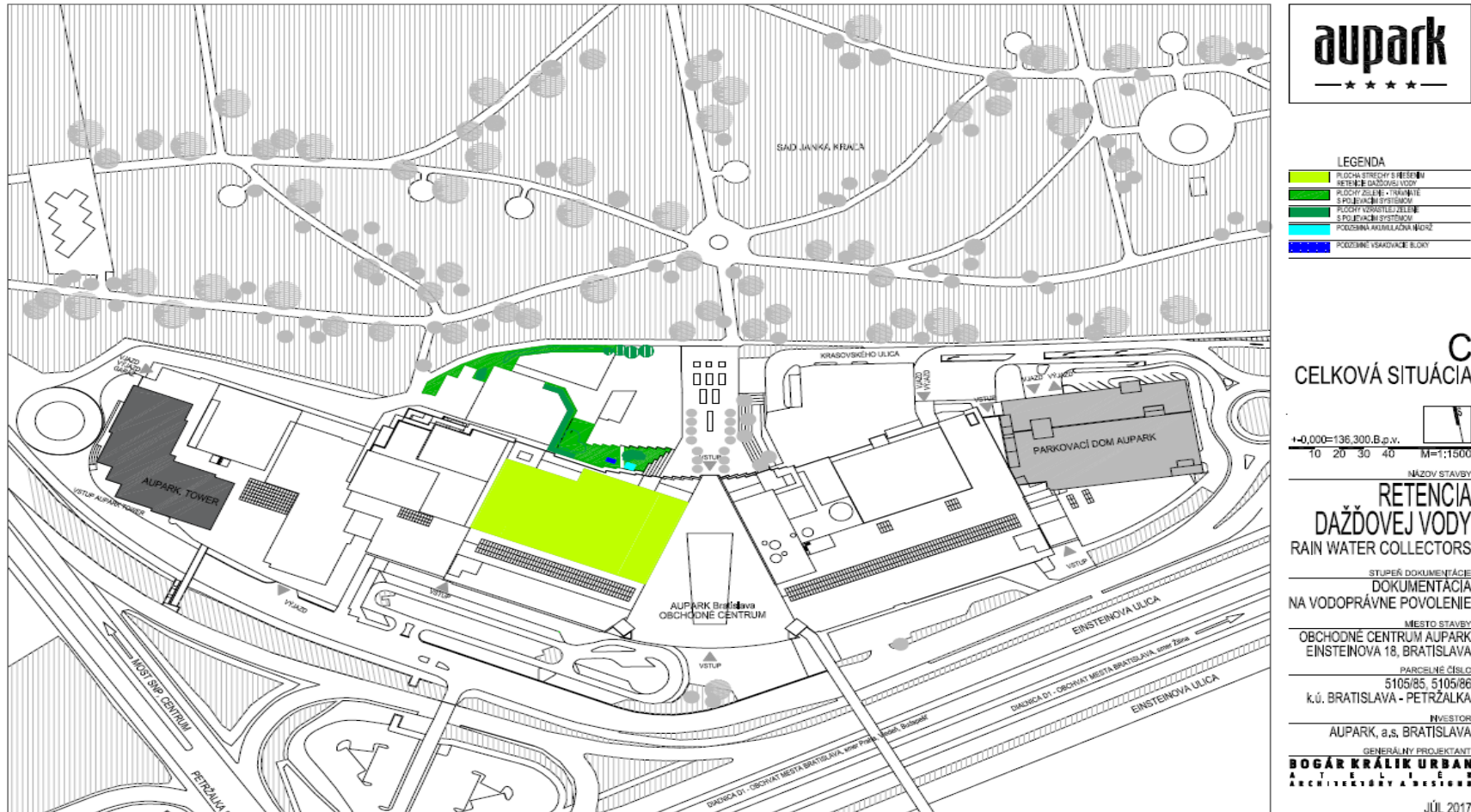


- Aupark is not using grey water at toilets as it was not previously designed to adopt this solution in later stage

AUPARK - water retention project



Water retention project location



- Project to collect rain water or use of rain drainage system for irrigation of greeneries
- Tax incentives implemented recently in Slovakia aiming at enhancing the use of rain water
- Estimated costs = 90k€

METROPOLE ZLICIN - water management

- Usage of rainwater collection in Metropole Zlicin for gardening purposes. Annually, over 21,000 liters of rainwater are collected.
- Currently we are looking for a solution for using water from the retention tank. Railway line along the shopping center complicates this solution.



THANK YOU



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