





















# The WaterMan project Urban raingarden at public swimming pool

Magdalena Gajewska
Gdańsk University of Technology

Jerzy Butkiewicz Braniewo Municipality

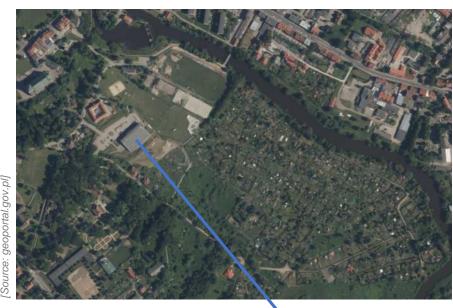












#### **Location:**

Łąkowa 1 Street, Braniewo, Poland



### **Municipal Sports Center "Zatoka"**

Recreation & Rehabilitation Complex "Healthy Braniewo"

### Infrastructure:

- Indoor pool complex:
  - sport swimming pool
  - leisure pool with wading pool
  - SPA bath
- Wellness facilities:
  - o sauna rooms (x2)
  - o gym
  - massage parlour
  - o rest zone
  - tanning beds











### 2.3 Pilot measure / reuse of treated water: Reuse of public swimming

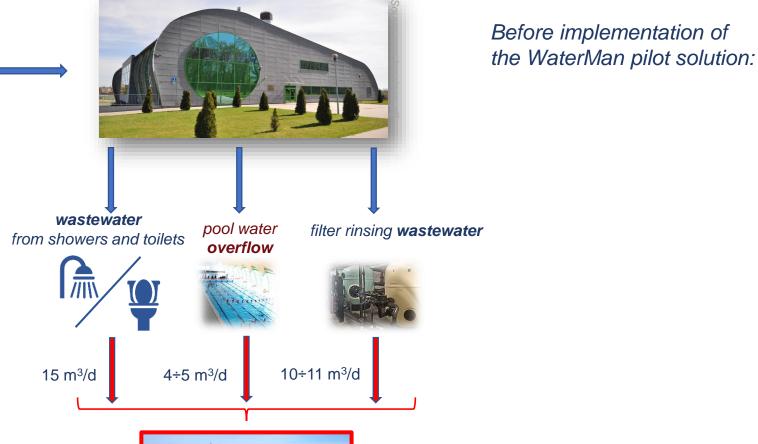
pool water



30 m<sup>3</sup>/d

water supply from the municipal network

- 1. Wastewater from showers and toilets and pool water overflow are combined within the Basin and discharged through a common sewage system directing the pool water overflow to the pilot requires reconstruction of the sewage system in the swimming pool building
- 2. Filter rinsing wastewater is discharged from the swimming pool building by a separate sanitary collector it can be easily directed to the pilot



discharge into the sewage system (100%): **30 m³/d** 











### 2.3 Pilot measure / reuse of treated water: Reuse of public swimming

pool water



30 m<sup>3</sup>/d

water supply from the municipal network

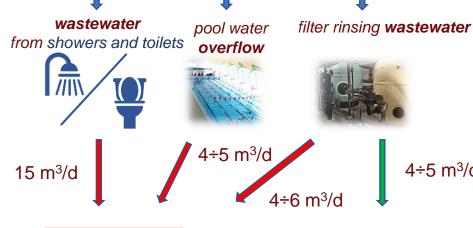


After implementation of the WaterMan pilot solution:

#### Reuse of treated wastewater:

- flushing the sewer system in Braniewo: ap. 3 m<sup>3</sup>/d (all year round)
- watering urban greenery (vegetation period)
- watering of plants by residents (vegetation period)
- ..... (in the process of arrangements)

discharge into the sewage system





4÷5 m<sup>3</sup>/d

- 40-50% **reduction** in filter rinsing wastewater
- √ 15% reduction in sewage discharge
- 15% savings on tap water





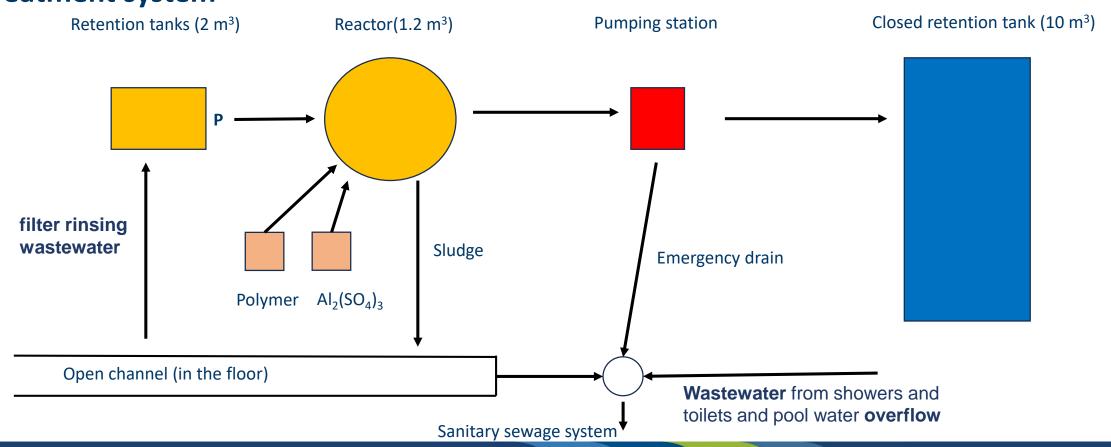






# 2.3 Pilot measure / reuse of treated water: Reuse of public swimming pool water

Swimming pool water reuse technology – **Proposed wastewater treatment system** 













### 2.3 Pilot measure / reuse of treated water: Reuse of public swimming pool water













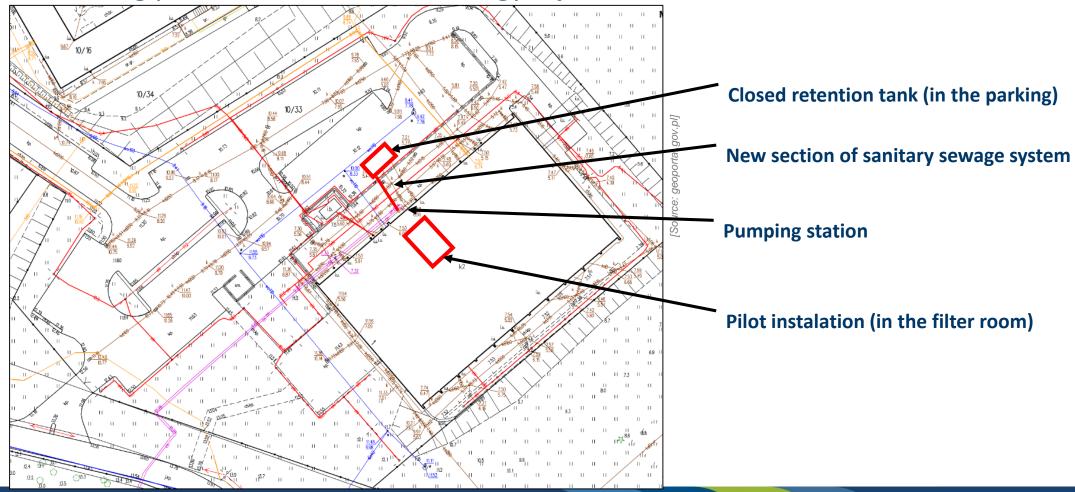






# 2.3 Pilot measure / reuse of treated water: Reuse of public swimming pool water

Swimming pool water reuse technology – pilot location

















**EURO-PROJEKT** Zbigniew Kuśmierz

ul. Królewiecka 195A, 82-300 Elbląg tel./fax +48 55 236 11 88 kom. +48 601 687 563 e-mail: projekt@euro-projekt.eu www.euro-projekt.eu

### PROJEKT ZAGOSPODAROWANIA TERENU

# BUDOWA ZBIORNIKA ŚCIEKÓW OCZYSZCZONYCH Z NIEZBĘDNĄ INFRASTRUKTURĄ PODZIEMNA DLA POTRZEB BASENU MIEJSKIEGO

OBIEKT	Budynek użyteczności publicznej Basen Miejski			
ADRES INWESTYCJI	ul. Łąkowa 1, 14-500 Braniewo			
NUMER DZIAŁKI, OBRĘB	dz. nr 10/33, obręb 8, Braniewo			
JEDNOSTKA EWIDENCYJNA	280201_1.0008.10/33			
INWESTOR	Urząd Miasta Braniewa			
ADRES INWESTORA	ul. Kościuszki 111, 14-500 Braniewo			
KATEGORIA OBIEKTU	XXVI - sieci, jak: elektroenergetyczne, telekomunikacyjne, gazowe, ciepłownicze, wodociągowe, kanalizacyjne oraz rurociągi przesyłowe			
DATA OPRACOWANIA	Styczeń 2025			

In early 2025, a comprehensive pilot project was prepared.

It covered the following sectors:

- construction,
- sanitary,
- electrical.

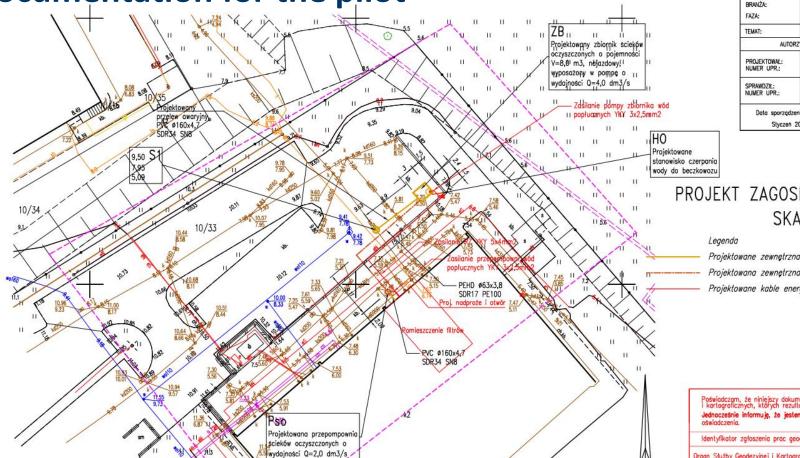












Branża: Faza:	SANITARNA PROJEKT BUDOWLANY				
TEMAT:	PROJEKT ZAGOSPODAROWANIA TERENU				
AUTORZY OPRACOWANIA		PODPIS	Data sprawdzeni		
PROJEKTOWAL: NUMER UPR.:	mgr inz. Paweł Lewandowski WAM/0148/PWOS/14			Styczeń 2025 r	
SPRAWDZIŁ: NUMER UPR.:	mgr inż. Jacek Zieliński POM/0039/POOS/14			Styczeń 2025 r	
Data sporządzenia: Styczen 2025 r.		Skala:	Rys.	nr: 1	

PROJEKT ZAGOSPODAROWANIA TERENU SKALA 1:500

> Projektowane zewnętrzna instalacja grawitacyjna ścieków oczyszczonych Projektowana zewnętrzna instalacja cisnieniowa ścieków oczyszczonych Projektowane kable energetyczne

Poświadczem, że ninięszy dokument został oprocowany w wyniku prac geodezynych kichych rezultaty zawiera operat techniczny pożytywnie zwerfylikowany.

Jednocześnie informuję, że jestem świadomy odpowiedzialności karnej za złożenie fatszyweg oświadczenia.

Identyfikator zgłoszenia prac geodezyjnych Gk0.6640.733.2024

Identyfikator zgłoszenia prac geodezyjnych	Gk0.6640.733.2024		
Organ Służby Geodezyjnej i Kartograficznej, który otrzymał zgłoszenie prac geodezyjnych	STAROSTA BRANIEWSKI		
Wykonawca prac geodezyjnych	Przedsiębiorstwo Usług	Geodezyjno— Kartograficznych	"GEOMIERZ"

The assumed location of the elements constituting the pilot has been confirmed











Pilot - photos from the production

Raw material storage (filter rinsing wastewater)













**Reaction tank** 













# Puzzel

















**Control system** 













# Methods for evaluating water usage

- a) Water consumption meter reading; "A flow meter on the tank and readings, e.g., once a week, showing how many cubic meters were taken for private use by external recipients. Readings are taken from valves and pump operating time
- b) Water usage log;
- c) Contractor register (assessment of demand trends and volumes)."













### **Helpdesk / Contacts for further information:**

Magdalena Gajewska Jerzy Butkiewicz

mgaj@pg.edu.pl jerzy.butkiewicz@braniewo.pl

+48 508 084 149 +48 531 120 930



The "BSR Water Recycling Toolbox" was elaborated as part of the project "WaterMan - Promoting water reuse in the Baltic Sea Region through capacity building at local level", The project is co-financed by the European Union (European Regional Development Fund) and implemented within the Interreg Baltic Sea Region Programme. More information:

eurobalt.org/WaterRecyclingToolbox
interreg-baltic.eu/project/waterman

WaterMan promotes a region-specific approach to water recycling, which intends to use the alternation of too much and too little water that has become typical in the Baltic Sea Region to make the local water supply more resilient, and supports municipalities & water companies in adapting their strategies.

The contents of "BSR Water Recycling Toolbox" are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union, the Managing Authority or the Joint Secretariat of the Interreg Baltic Sea Region Programme.

