

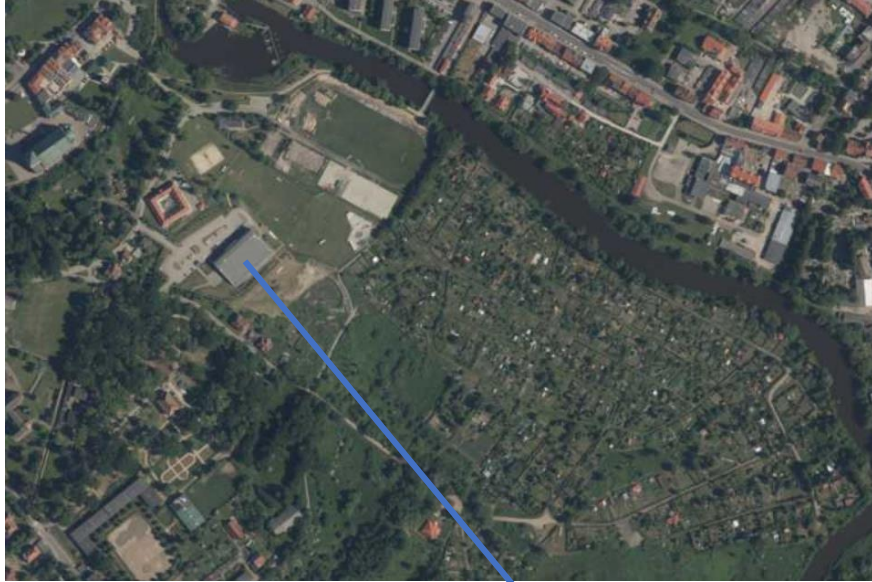
The WaterMan project

Reuse of public swimming pool water

Magdalena Gajewska
Gdańsk University of Technology

Jerzy Butkiewicz
Braniewo Municipality





[Source: geoportal.gov.pl]

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:**

- sauna rooms (x2)
- gym
- massage parlour
- rest zone
- tanning beds

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



30 m³/d

water supply
from the municipal network



[Source: Braniewo Municipal Waterworks Ltd.]

*Before implementation of
the WaterMan pilot solution:*

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*

wastewater
from showers and toilets



15 m³/d

pool water
overflow



4÷5 m³/d

filter rinsing wastewater



10÷11 m³/d



[Source: Braniewo Municipal Waterworks Ltd.]

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

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



30 m³/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 m³/d (all year round)
- watering urban greenery (vegetation period)
- watering of plants by residents (vegetation period)
- (in the process of arrangements)

wastewater
from showers and toilets



15 m³/d

pool water
overflow



4÷5 m³/d

filter rinsing wastewater



4÷5 m³/d

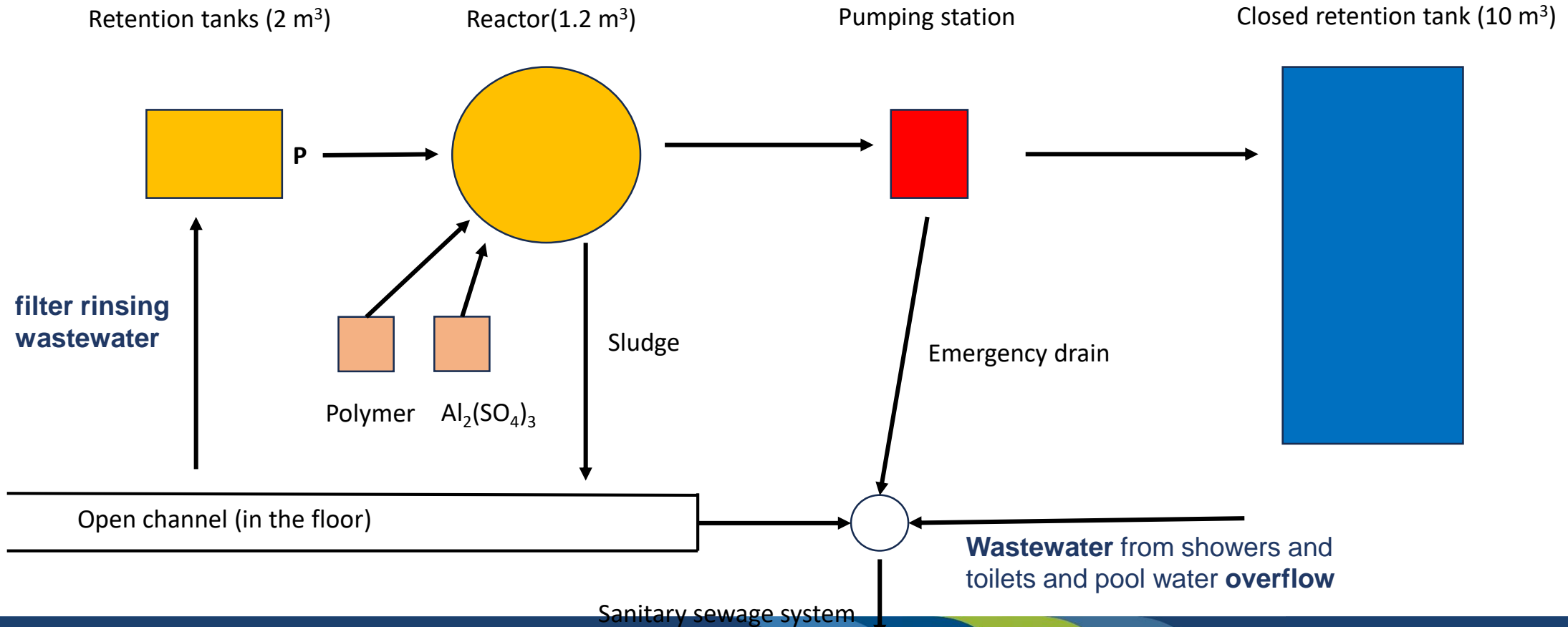


discharge into the sewage system

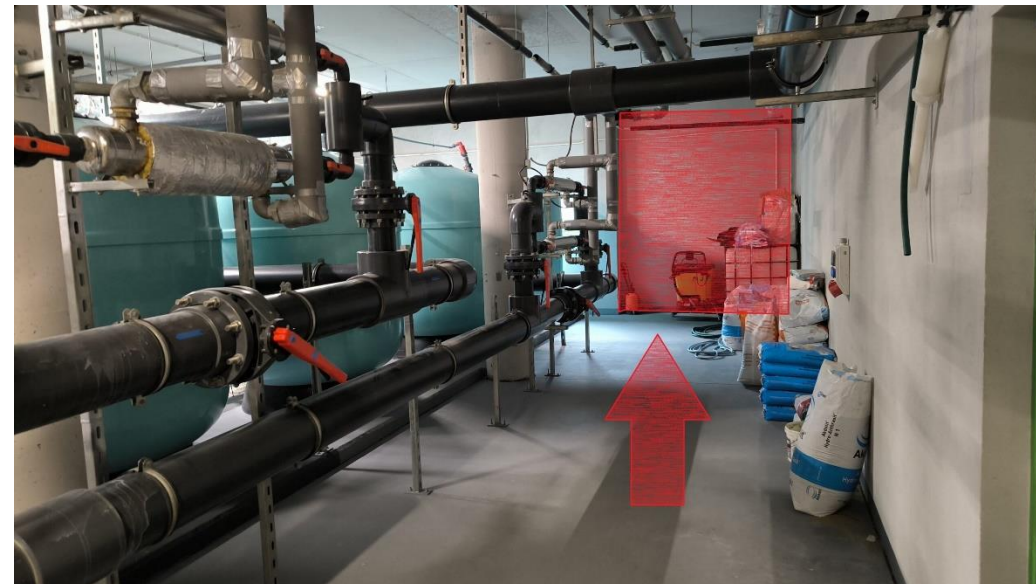
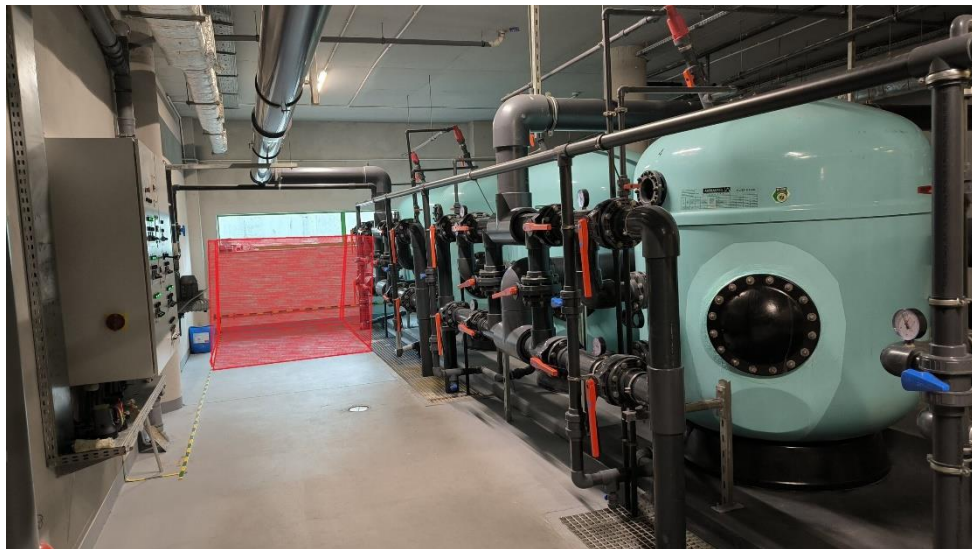
- ✓ 40-50% reduction in filter rinsing wastewater
- ✓ 15% reduction in sewage discharge
- ✓ 15% savings on tap water

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

Swimming pool water reuse technology – Proposed wastewater treatment system

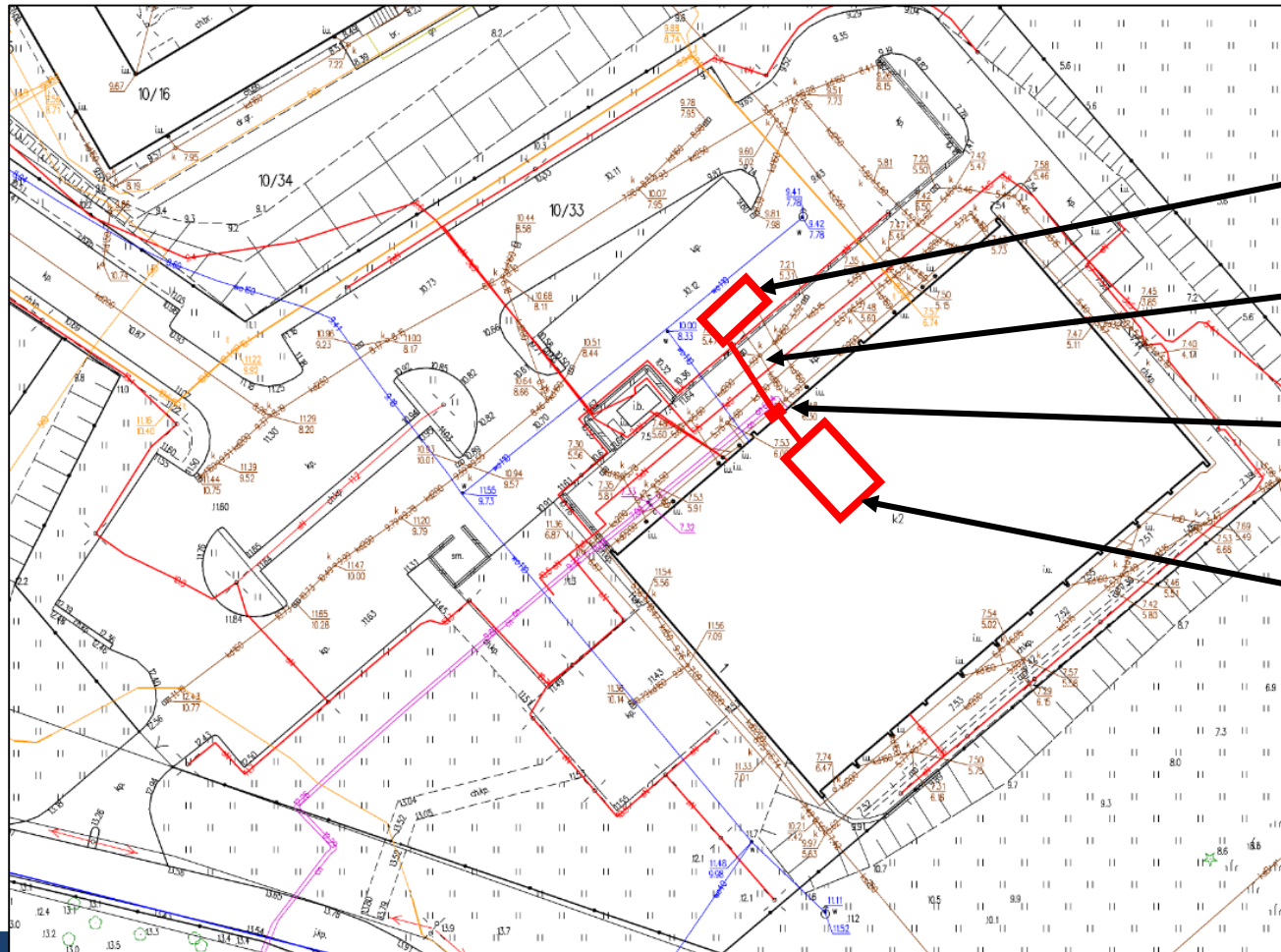


2.3 Pilot measure / reuse of treated water: Reuse of public swimming pool water



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

Swimming pool water reuse technology – pilot location



[source: geopot.al.gov.pl]

Closed retention tank (in the parking)

New section of sanitary sewage system

Pumping station

Pilot instalation (in the filter room)

Design documentation for the pilot



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 NIEZBEDNĄ INFRASTRUKTURĄ

PODZIEMNĄ DLA POTRZEB BASENU MIEJSKIEGO

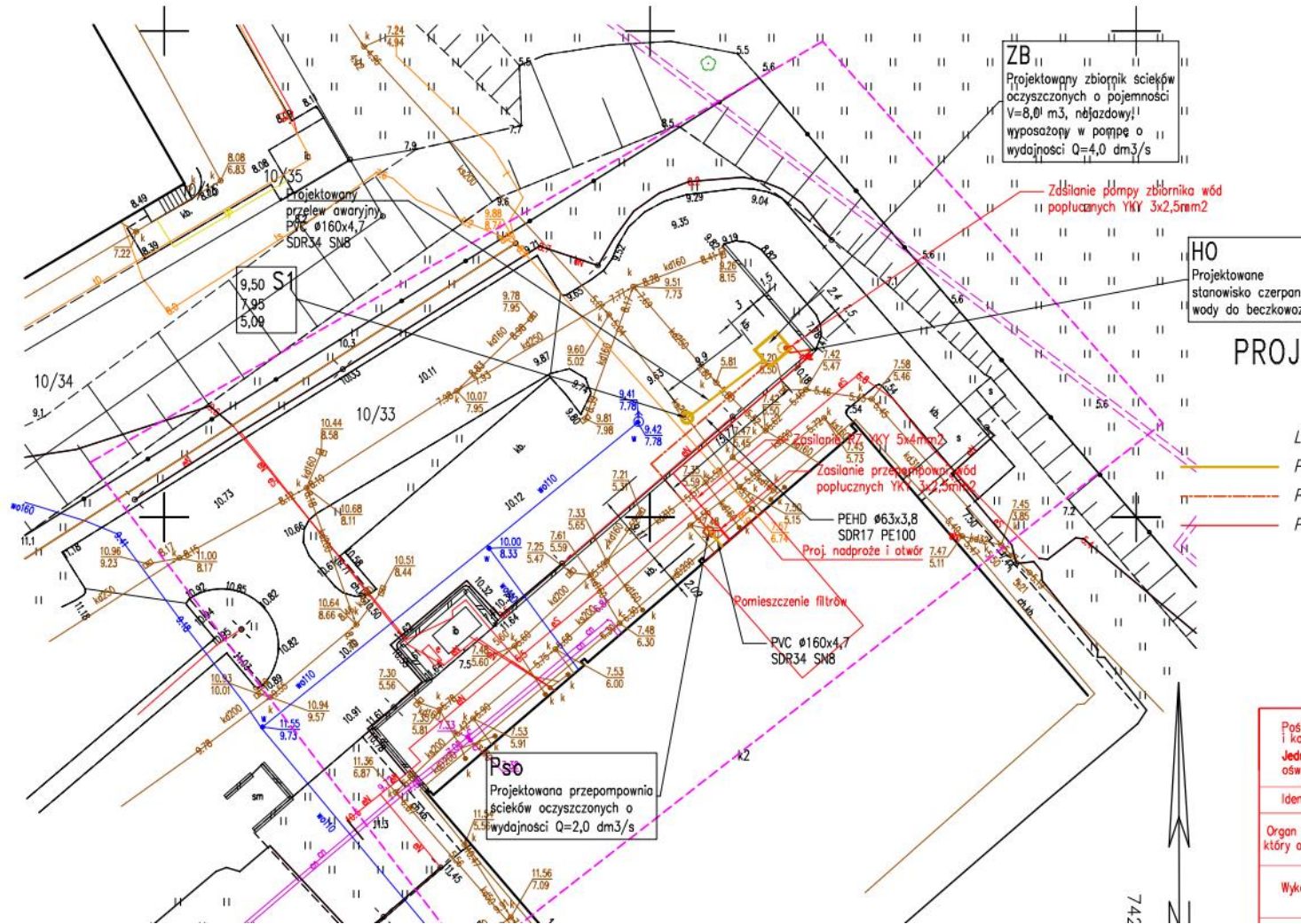
| | |
|------------------------------|---|
| OBIEKT | Budynek użyteczności publicznej Basen Miejski |
| ADRES INWESTYCJI | ul. Łąkowa 1, 14-500 Braniewo |
| NUMER DZIAŁKI, OBRĘB | dz. nr 10/33, obręb 8, Braniewo |
| JEDNOSTKA EWIDENCYJNA | 280201_1.0008.10/33 |
| INWESTOR | Urząd Miasta Braniewa |
| 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.

Design documentation for the pilot



| | | | |
|---------------------------------------|--|-----------|-----------------|
| BRANŻA: | SANITARNA | | |
| FAZA: | PROJEKT BUDOWLANY | | |
| TEMAT: | PROJEKT ZAGOSPODAROWANIA TERENU | | |
| AUTORZY OPRACOWANIA | | PODPIS | Data sprawdzeni |
| PROJEKTOWAŁ: NUMER UPR.: | mgr inż. Paweł Lewandowski WAM/0148/PWOS/14 | | Sycczen 2025 r |
| SPRAWDZIŁ: NUMER UPR.: | mgr inż. Jacek Zielinski POM/0039/POOS/14 | | Sycczen 2025 r |
| Data sporządzenia: Sycczen 2025 r. | Skala: 1:500 | Rys. nr.: | 1 |

PROJEKT ZAGOSPODAROWANIA TERENU SKALA 1:500

Legenda

- Projektowane zewnętrzna instalacja grawitacyjna ścieków oczyszczonych
- Projektowana zewnętrzna instalacja ciśnieniowa ścieków oczyszczonych
- Projektowane kable energetyczne

Poświadczam, że niniejszy dokument został opracowany w wyniku prac geodezyjnych i kartograficznych, których rezultaty zawiera operat techniczny pozytywnie zweryfikowany. Jednocześnie informuję, że jestem świadomy odpowiedzialności karnej za złożenie fałszywego oświadczenia.

| | |
|---|--|
| Identyfikator zgłoszenia prac geodezyjnych | GKO.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)**

Design documentation for the pilot



Reaction tank



Design documentation for the pilot

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

mgaj@pg.edu.pl

+48 508 084 149

Jerzy Butkiewicz

jerzy.butkiewicz@braniewo.pl

+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.

