

VillageWaters WP3 workshop

Pilot evaluation – Ainaži, Voldemara 8

Loreta Urtāne, Aleksejs Pertsovs
University of Latvia (PP6)

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Information about the pilot - situation



Information about the pilot - territory

- Definition of the territory: **4-apartment house in Ainaži, Salacgrīva parish**
- Water bodies on the territory: **none**
- Protected Areas: in territory of Northern Biosphere Reserve
- Owner: **Salacgrīva Municipality**
- Operator: **Salacgrīva Ūdens, municipal utilities company**



Information about the pilot – loads (1/3)

- Population of the house on working days: 18
- Population of the house on holydays: 30
- Connected to municipal water supply system: **0/promised after WWTP**
- Connected to municipal wastewater evacuation system: **unsound development**
- Public institutions: **none**
- Industries: **none**
- Average water consumption: **2 buckets/person/day**

Information about the pilot – loads (2/3)

Influent wastewater loads calculation per water unit

Pollutant	Concentration	Units of measure
BOD ₅	705	mg/l
COD	1 294	mg/l
Suspended solids	824	mg/l
N _{total}	118	mg/l
P _{total}	24	mg/l

According to MKN Nr.327/LBN 223-15 pollutants per person per day:

TSS=70 g, BSP₅=60 g, COD 110 g, N_{total}=10 g, P_{total}=2 g

Average daily hydraulic load per person in Ainaži: **85 l**

Information about the pilot – loads (3/3)

Daily wastewater load calculation

Pollutant	Load 18 people	Load 30 people	Units of measure
BOD ₅	1.1	1.8	kg/day
COD	2.0	3.3	kg/day
Suspended solids	1.3	2.1	kg/day
N _{total}	0.2	0.3	kg/day
P _{total}	0.04	0.06	kg/day

According to MKN Nr.327/LBN 223-15 pollutants per person per day:

TSS=70 g, BSP₅=60 g, COD 110 g, N_{total}=10 g, P_{total}=2 g

Average daily hydraulic load per person in Ainaži: **85 l**

Information about the pilot – old system

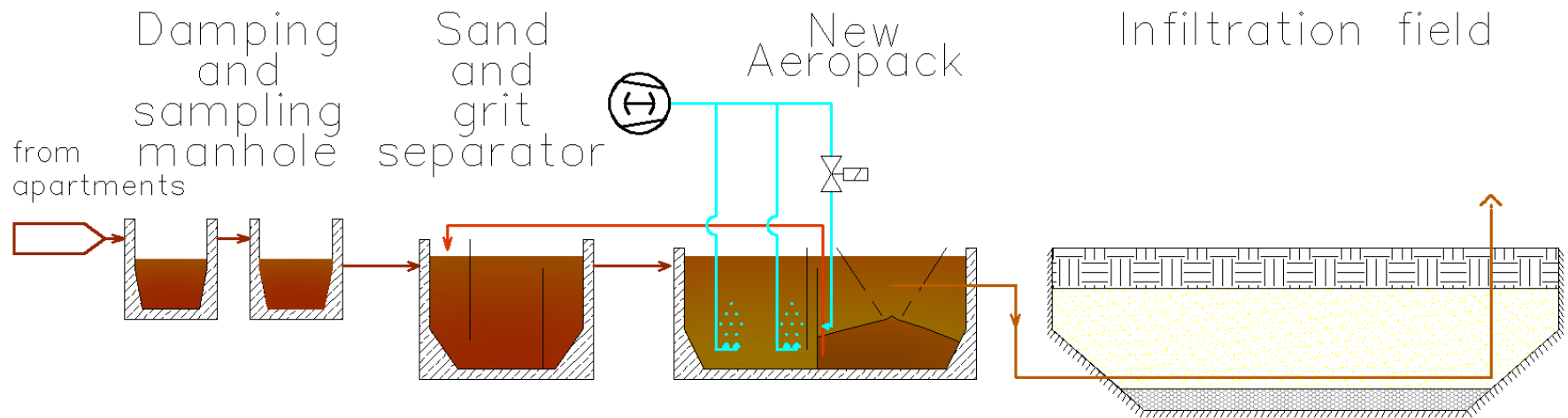
- Year of construction: **1970s-1980s**
- Type of WWTP: **individual cesspool for each apartment**
- Treated water discharge: **none**
- Power consumption: **none**
- Processing of anaerobic sludge: **evacuated to Salacgrīva WWTP 6-8/year**

The problem

- There is no any proper wastewater treatment is provided



Proposed solution



Expected results

- Estimated volume of investments: 18 000 EUR
- Year of construction: **2018, Qn = 4.5 m³/day**
- Type of WWTP: **1 × aeropack + infiltration field**
- Treated water discharge: **infiltration field**
- Power consumption: **9.6 kWh/day**
- Processing of excessive sludge: **evacuated to Salacgrīva WWTP 2/year**
- Lifecycle: **30 years**
- Social impact: **“We finally will be able to take a bath!”**

Progress as per February 2018

- Performed feasibility study
- WWTP is under development of design papers,
- Designer company “EkoStandarts Tehnoloģijas”