

**Stakeholders' round table discussions 10-11<sup>th</sup> November 2021 in Daugavpils**  
**Presentation of the joint action plan for the management of Daugavpils and Anykšćiai urban wetlands. Practical application of recommendations**

# Recommendations for further management of the Green pond in Anykšćiai

## AREA:

The whole area  
(incl. grassland  
and apple tree  
garden ~ 1 ha

Pond area ~ 0,2  
ha



Lets look  
arround:



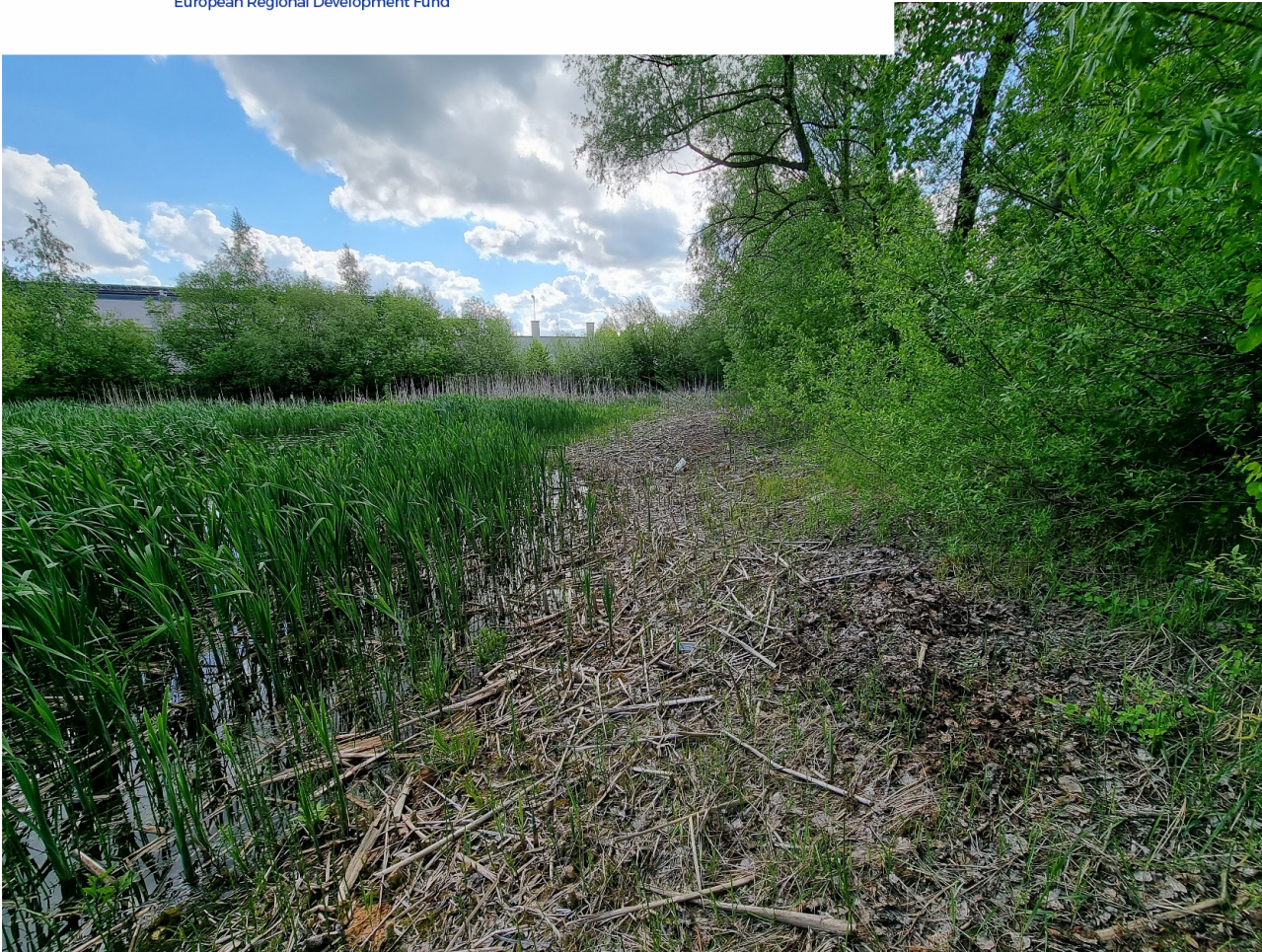
**PROBLEM:**  
1. Water level

2021 05 25



## Joint Management of Urban Wetland Areas in border region Latvia-Lithuania. (Urb-Area)

Project Nr. LLI-472



- Water table has dropped by 0,8-1 m in recent decade and the new temporarily submerged eulittoral biotopes occurred

Northern part  
of the Green  
pond became a  
dry land



Water level  
dropped  
drastically  
during summer  
2021

2021 07 28



No water level  
corrections in  
autumn...

2021 09 20





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RESEARCH



Sediment research for  
potential pollutants





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## Joint Management of Urban Wetland Areas in border region Latvia-Lithuania. (Urb-Area)

Vandens tyrimai

Žirmūnų g. 106, Vilnius ☎ 8(5)2325287

Tyrimų protokolas Nr. **210525LG069** | Ėminio gavimo data 2021-05-25  
Užsakovas: UAB "Senasis ežerėlis" | ausrys@senasisezerelis.lt

### Sunkiųjų metalų analizės grunte rezultatai

Data	Objektas	Punktas	ID	Cd	Cr	Cu	Ni	Pb	Zn	Hg
				mg/kg sauso grunto						
21 05 25	Kūdra	Anykščių m., Sodų g.	41289	<0.15	13	15	13	2	<20	<0.05

Rezultatas, mažesnis už nustatymo ribą, žymimas (<...).

Sunkiųjų metalų analizė atlikta atominės absorbcijos spektrometrija, naudojant grafitinę krosnį (ISO 11047:2004).

Gyvsidabrio analizė atlikta pagal ISO 16772:2004.

Tyrimų protokolą parengė



chemikas-analitikas Rimantas Akstinas

Rezultatai susiję tik su tirtais objektais, taikytini tokiam ėminiui, koks buvo gautas. Tyrimų protokolą dalimis dauginėti leidžiama tik su UAB „Vandens tyrimai“ sutikimu. Tyrimas baigtas ir protokolas paruoštas (2021-06-03)

Vandens tyrimai

Žirmūnų g. 106, Vilnius ☎ 8(5)2325287

Tyrimų protokolas Nr. **210525LG069** | Ėminio gavimo data 2021-05-25  
Užsakovas: UAB "Senasis ežerėlis" | ausrys@senasisezerelis.lt

### Naftos produktų ir organinės anglies analizės grunte rezultatai

Paėmimo data	Objektas	Nr.	Gylis, m.	ID	% Sausų medžiagų	mg NP /kg sauso grunto	% C org. sausame grunte
21 05 25	Kūdra	Anykščių m., Sodų g.		41289	51.4	<50	4.06

Naftos produktų analizė atlikta svorio metodu.

Naftos produktų analizė atlikta nepažeidžiant Europos Parlamento ir Tarybos reglamento dėl ozono sluoksnį ardančių medžiagų.

Organinės anglies analizė atlikta deginant rūgščioje terpėje su K2Cr2O7.

Tyrimų protokolą parengė



Chemikė-analitikė Edita Puvaskienė

Rezultatai susiję tik su tirtais objektais, taikytini tokiam ėminiui, koks buvo gautas. Tyrimų protokolą dalimis dauginėti leidžiama tik su UAB „Vandens tyrimai“ sutikimu. Tyrimas baigtas ir protokolas paruoštas (2021-06-09)

*Suvestinė redakcija nuo 2021-05-01*

*Įsakymas paskelbtas: TAR 2014-12-18, i. k. 2014-19980*



**LIETUVOS RESPUBLIKOS APLINKOS MINISTRAS**

**ĮSAKYMAS  
DĖL PAVIRŠINIŲ VANDENS TELKINIŲ TVARKYMO REIKALAVIMŲ APRAŠO  
PATVIRTINIMO**

2014 m. gruodžio 16 d. Nr. D1-1038  
Vilnius

1 lentelė. Dugno nuosėdų skirstymas į kategorijas pagal sunkiųjų metalų koncentraciją

Dugno nuosėdų kategorija	Sunkiųjų metalų koncentracija, mg/kg s. m.						
	Pb	Cd	Cr	Cu	Ni	Zn	Hg
I	<140	<1,5	<140	<75	<50	<300	<1,0
II	140–750	1,5–20	140–400	75–1000	50–300	300–2500	1,0–8,0
III	>750	>20	>400	>1000	>300	>2500	>8,0
Anykščiai pond	<b>2</b>	<b>&lt;0,15</b>	<b>13</b>	<b>15</b>	<b>13</b>	<b>&lt;20</b>	<b>&lt;0,05</b>

## Biodiversity

### 1. Plants (Macrophytes)



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The most common species of helophytes (e.g. *Phragmites australis*, *Typha latifolia*, *Schoenoplectus lacustris*, *Equisetum fluviatile*, *Bidens cernua* and others) are predominant in shallow littoral.



**PROBLEM:**  
2. Overgrowth by  
helophytes

Helophytes form dense stands and this could cause a problem for less competitive plant species in nearest future



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Other water  
vegetation:  
potameids and  
limneids is very  
dense as well



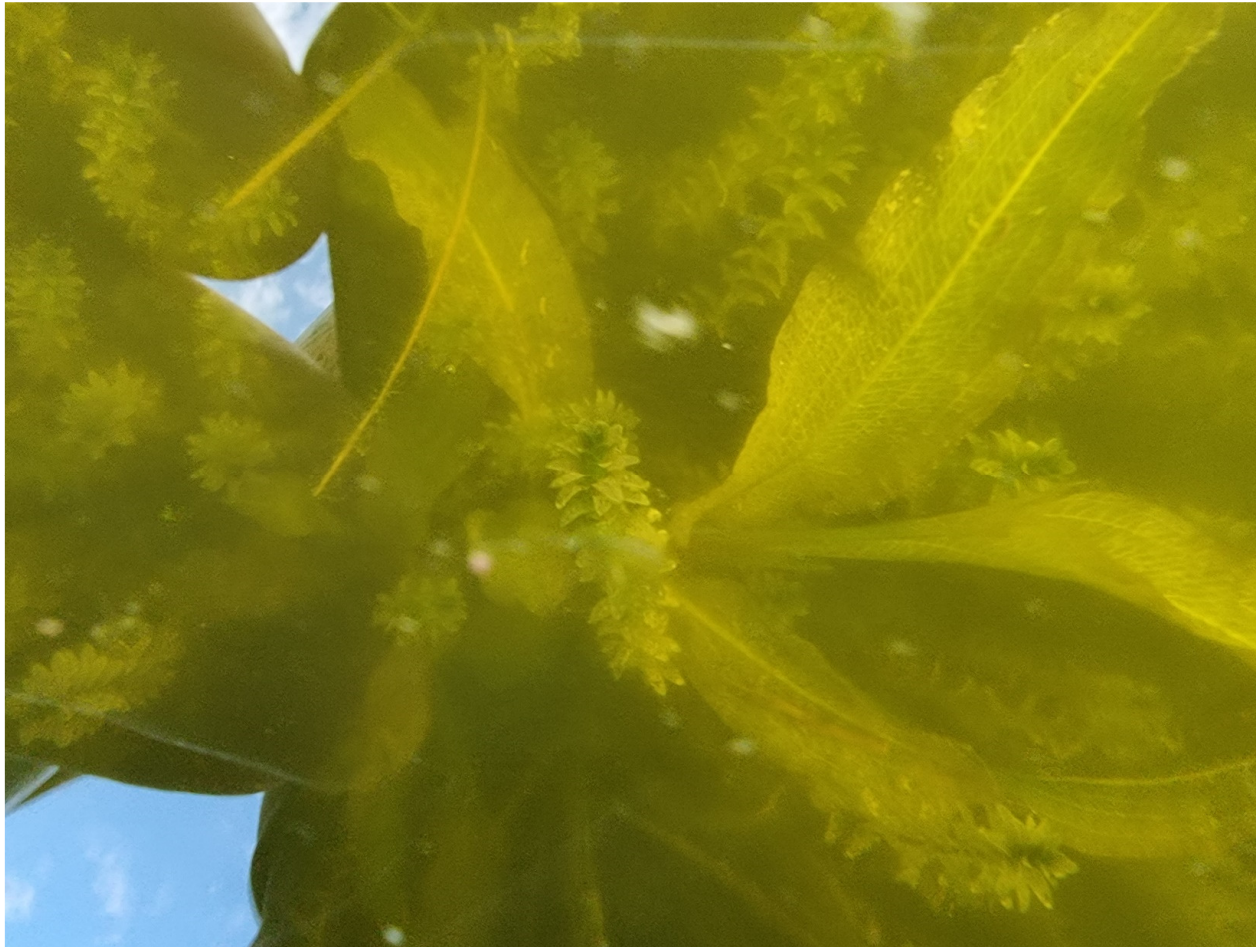


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Also the most common  
species of eutrophied lakes  
and ponds are prevail:  
*Potamogeton natans*, *P.*  
*lucens*, *Hippuris vulgaris*,  
*Elodea canadensis*,  
*Ceratophyllum demersum*).



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## Plants - rare species

Several (at least 4) non-flowering plants of marsh orchids (*Dactylorhiza* sp.,  
*Orchidaceae*) were found in eu littoral of the pond

We suspect, it could be *Dactylorhiza maculata* (L.)  
Soó.

If so, this species is enlisted into the

**Red data book of Lithuania**

(Full text of the newest edition (2021) could be found  
and downloaded at:

[https://www.researchgate.net/publication/350767678\\_Lietuvos\\_raudonoji\\_knyga\\_Gyvunai\\_augalai\\_grybai](https://www.researchgate.net/publication/350767678_Lietuvos_raudonoji_knyga_Gyvunai_augalai_grybai)

Red Data Book of Lithuania Animals plants fung  
i )



Another orchid  
species –  
*Epipactis sp.*



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The main threat facing orchid species habitat in eu littoral of the Anykščiai Green pond is the change due to overgrowth by reeds and shrubs (e.g. *Salix caprea*, *S. fragilis*) as well as potential fluctuations of the water table.

### PROBLEM:

3. How to restore pond ecosystem sustaining untouched orchid habitats?

## Biodiversity:

### 2. Pond fauna

#### 2.1. Dragonflies, *Odonata*

The fauna of dragonflies wasn't abundant or rare.  
We found:

**Azure damselfly** (*Coenagrion puella*)

**Large red damselfly** (*Pyrrhosoma nymphula*)

**Four-spotted chaser** (*Libellula quadrimaculata*)

**Banded demoiselle** (*Calopteryx splendens*)



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## 2.2. Amphibian and reptilian

Pool frog *Pelophylax lessonae*

The IUCN Red List -  
Least Concern

EU Habitats Directive –  
Annex IV: animal and plant  
species  
of community interest in need  
of  
strict protection  
Bern Convention - Annex III





## Grass snake (*Natrix natrix*)

- Grass snake is often found near water and feeds almost exclusively on amphibians.
- Least Concern (IUCN)
- (Bern Convention) Annex III
- Natural hiding places are required - leave the old stumps, pile of old leaves



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### 2.3. *Mollusca, Gastropoda*

One of the most common snail species: *Lymnaea stagnalis* and *Planorbis planorbis* were found in the Anykščiai pond



## 2.4. Worms - Annelida

# *Hirudo medicinalis* L. European medicinal leech

Red data book of Lithuania

A typical habitat for *H. medicinalis* would be a small pond with a warm water and muddy bottom edged with reeds and in which frogs are at least seasonally abundant.

### PROBLEM:

4. How to clean the pond and not to extinguish protected leech?



## Other findings – Rubbish





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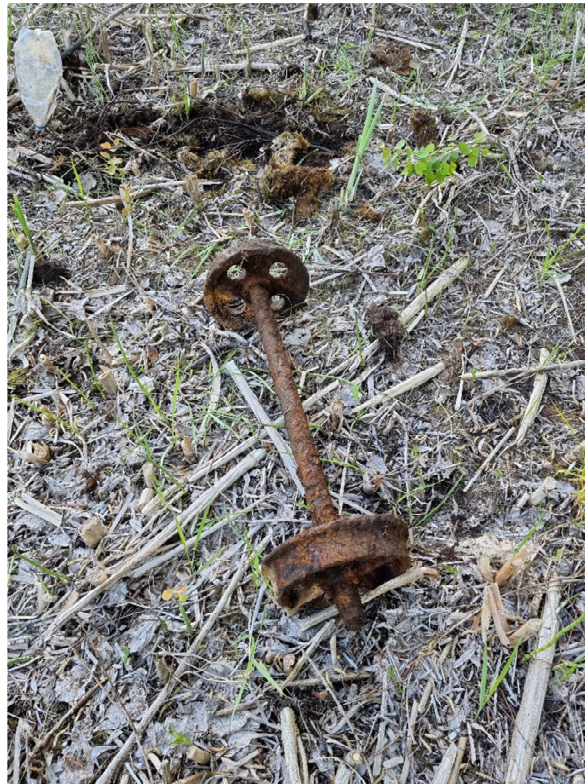
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# Other findings – technical heritage



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Other findings –  
invasive species  
(Ash-leaved mapple)

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What will we do ???





1. Collect  
and sort all  
the rubbish  
and cut  
invasive  
trees and  
unwanted  
bushes



2. Perform  
hydrogeological  
survey in order  
to be safe when  
deepening a  
part of the  
Green pond



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3. Clean an  
overgrown  
part of the  
Green pond  
up to 3 m  
waterdepth:





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### 3.1. Prepare technical documentation



3.2. Perform  
excavation of  
the pond as well  
as further  
stabilization of  
the cleaned  
territory



Orchid and  
leach habitats  
in Eastern part  
of the pond  
will remain  
untouched



## 4. Infrastructure for visitors ...



4. ... and for  
inhabitants  
will be  
installed





5. Further  
monitoring  
and  
educational  
activities





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*Thank's for Your attention*