

# Recommendations for further management of the natural and landscape values of the Esplanade wetland



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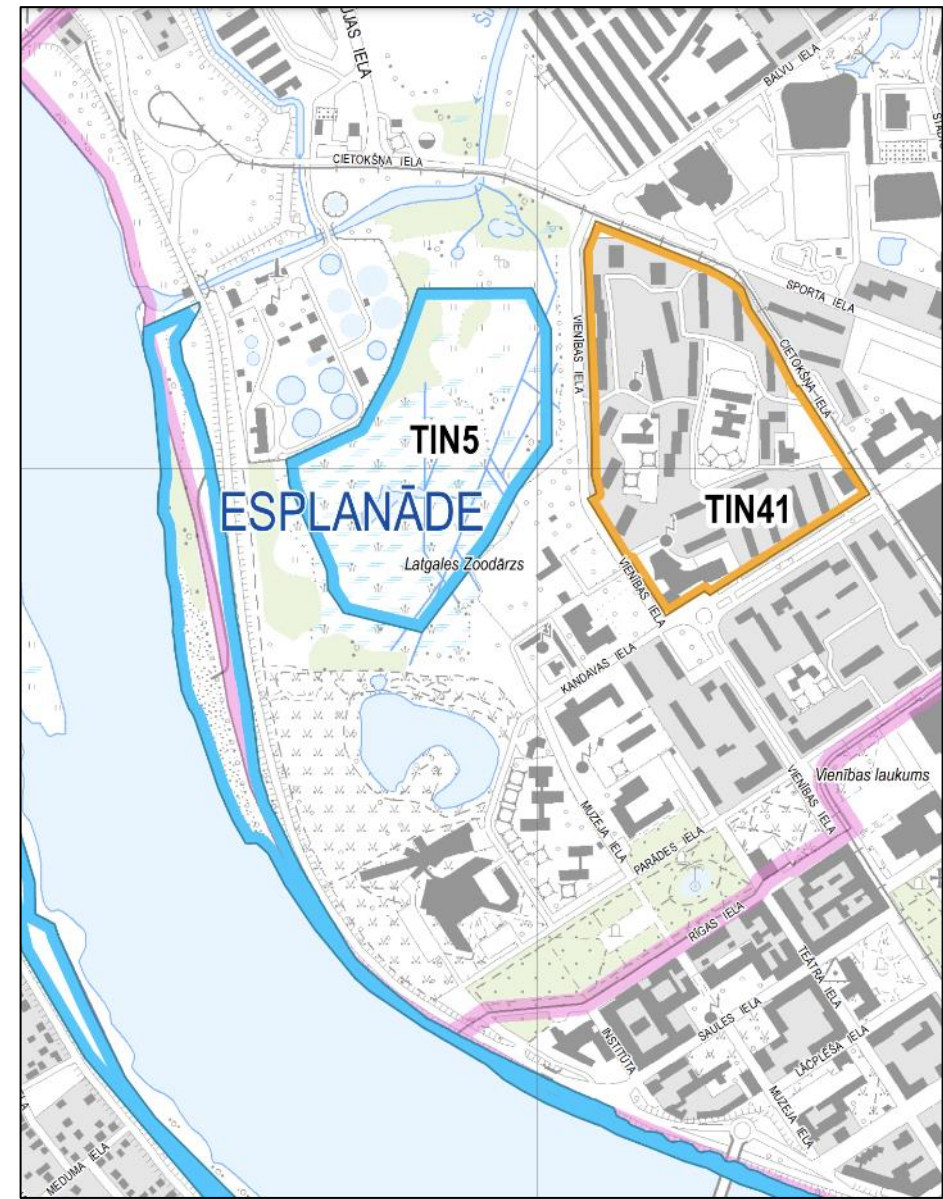
Esplanade wetland area



Land use in the Esplanade wetland area

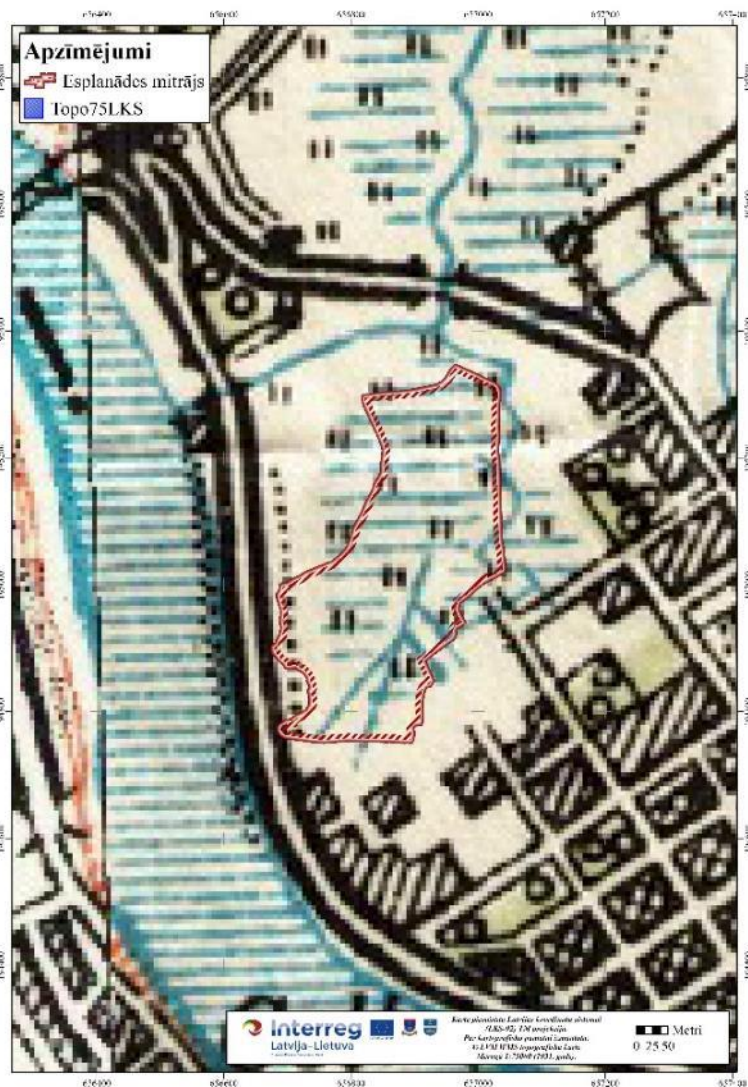


Land ownership in the area of the Esplanade wetland



Esplanāde wetland area in Daugavpils city spatial plan

# Historical aspects



Esplanāde wetland area in 1931

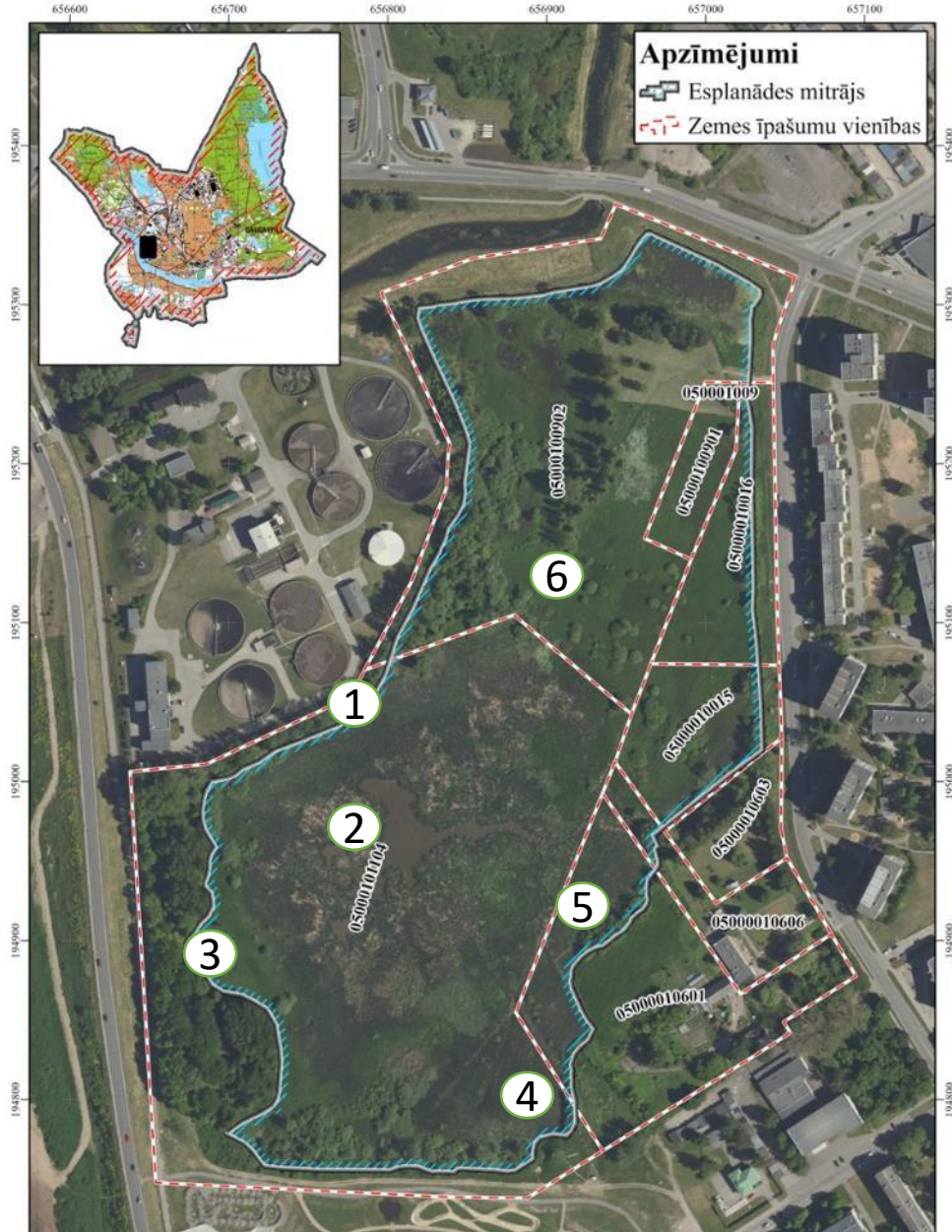


Esplanāde wetland area in 1975



Esplanāde wetland area in 2019.

# Current situation





Esplanāde wetland area, oblique aerial view from SE (photo by Dainis Lazdāns)



Esplanāde wetland area – southern part, oblique aerial view from NE (photo by Dainis Lazdāns)



Esplanāde wetland area – central part, oblique aerial view from E (photo by Dainis Lazdāns)





Esplanāde wetland area – northern part, oblique aerial view from S (photo by Dainis Lazdāns)

## **Inventory of natural values found in the Esplanade wetland**

- An inventory of natural values found in the Esplanade wetland was carried out during the period from April 2021 to August 2021.

## Inventory of natural values found in the Esplanade wetland

- Involved experts in the inventory:
- Dr. Uldis Valainis, nature conservation specialist
- Dr. Mārtiņš Kalniņš, freshwater habitat expert
- Dr. Jānis Birzaks, fish species expert
- Dr. Maksims Balalaikins, invertebrate species expert
- Dr. Andris Čeirāns, amphibian and reptile species expert
- Dr. Kristīne Dreija, landscape specialist
- Dr. Juris Soms, hydrology expert
- Msc. Gaidis Grandāns, bird species expert
- Msc. Karīna Dukule - Jekušenoka, mammal species expert
- Msc. Dana Krasnopolyska, vascular plant species and grasslands expert
- Msc. Maris Nitcis, GIS specialist

# Specially protected and rare species found in the research area

No	English name	Latin name	Species status	Remarks
<b>BIRDS</b>				
1.	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	SPS, MS	Found in the territory
2.	Corncrake	<i>Crex crex</i>	SPS, BD I, RDB 2	Found in the territory
3.	Little Bittern	<i>Ixobrychus minutus</i>	SPS, BD I, RDB 1	Found in the territory
4.	Red-backed Shrike	<i>Lanius collurio</i>	SPS, BD I	Found in the territory
5.	Bluethroat	<i>Luscinia svecica</i>	SPS, BD I, RDB 4	Found in the territory
6.	Eurasian Penduline-Tit	<i>Remiz pendulinus</i>	SPS, RDB 3	Found in the territory
7.	Little Grebe	<i>Tachybaptus ruficollis</i>	SPS, RDB 3	Found in the territory
<b>INVERTEBRATES</b>				
8.	Musk beetle	<i>Aromia moschata</i>	RDB 4	Found in the territory
9.	Roman snail	<i>Helix pomatia</i>	SPS, HD V	Found in the territory
10.	Jet ant	<i>Lasius fuliginosus</i>	SPS	Found in the territory
<b>AMPHIBIANS</b>				
11.	European green toad	<i>Bufo viridis</i>	SPS, HD IV, RDB 3	Found in the territory
12.	Common Spadefoot toad	<i>Pelobates fuscus</i>	SPS, HD IV, RDB 4	Found in the territory
13.	Edible frog	<i>Pelophylax esculentus/lessonae</i>	HD IV	Found in the territory
<b>MAMMALS</b>				
14.	Pond bat	<i>Myotis dasycneme</i>	SPS, HD II, RDB 2	Found near the territory
15.	Daubenton's bat	<i>Myotis daubentonii</i>	SPS, HD II	Found near the territory
16.	Brandt's bat	<i>Myotis brandtii</i>	SPS, HD IV, RDB 3	Found near the territory
17.	Brown long-eared bat	<i>Plecotus auritus</i>	SPS, HD IV	Found near the territory
18.	Northern bat	<i>Eptesicus nilsoni</i>	SPS, HD IV	Found near the territory
19.	Parti-coloured bat	<i>Vespertilio murinus</i>	SPS, HD IV, RDB 3	Found near the territory
<b>PLANTS</b>				
20.	Early Marsh Orchid	<i>Dactylorhiza incarnata</i>	SPS	Found near the territory

**SPS** - specially protected species; **MS** - for conservation of the species, micro-reserves can be established; **RDB** - species included in the Red Book; **BD** - species included in the EU Birds Directive; **HD** - species included in the EU Habitats Directive

## Black-headed Gull *Chroicocephalus ridibundus*



Black – headed Gull (Photo: J. Jansons)



Black – headed Gulls nesting  
colony in the Esplanade wetland (Photo: A. Erts)



Black – headed Gulls above the nesting  
colony in the Esplanade wetland (Photo: A. Erts)

# Factors negatively affecting the natural values found in the territory:

- ✓ Changes of hydrological regime



Drained hay meadows in place of the existing Esplanāde wetland (1975)



Map of the drainage system in Esplanāde wetland area



Exavated extension of Šuņupe on the north of the Esplanade wetland area  
(Photo: Karīna Dukule – Jekušenoka)



Some of drainage system elements are still functioning  
(Photo: D. Krasnopoļska)



Open water area in Esplanāde wetland in 1995



Open water area in Esplanāde wetland in 2017



✓ Increasing of plant biomass



(Photo: A. Erts)



(Photo: D. Krasnopoļska)

Monolithic stands of *Typha latifolia* and *Phragmites communis*

✓ Overgrowing with trees and bushes



(Photo: A. Erts)



(Photo: D. Krasnopoļska)

✓ Distribution of invasive alien species in the wetland area



Ash – leaved maple *Acer negundo* (Photo: D. Krasnopoļska)



Tatarian dogwood *Swida alba* (Photo: V. Ērmāne)



**Interreg**  
**Latvija-Lietuva**

European Regional Development Fund



EUROPEAN UNION

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

Project Nr. LLI-472



Himalayan balsam  
*Impatiens glandulifera*  
(Photo: N. Romanceviča)



Wild cucumber  
*Echinocystis lobata*  
(Photo: U. Valainis)



Chinese sleeper *Perccottus glenii*  
(Photo: Yuriy Kvach)



American mink *Mustela vison*  
(Photo: Karīna Dukule - Jekušonoka)

- ✓ The impact of antropogenic factors on Esplanāde wetland



The periphery of the wetland is contaminated with garbage  
(Photo: D. Krasnopoļska)



Map of existing trodden trails in Esplanade wetland



(Photo: A. Erts)



(Photo: D. Krasnopoļska)



(Photo: U. Valainis)



(Photo: A. Erts)





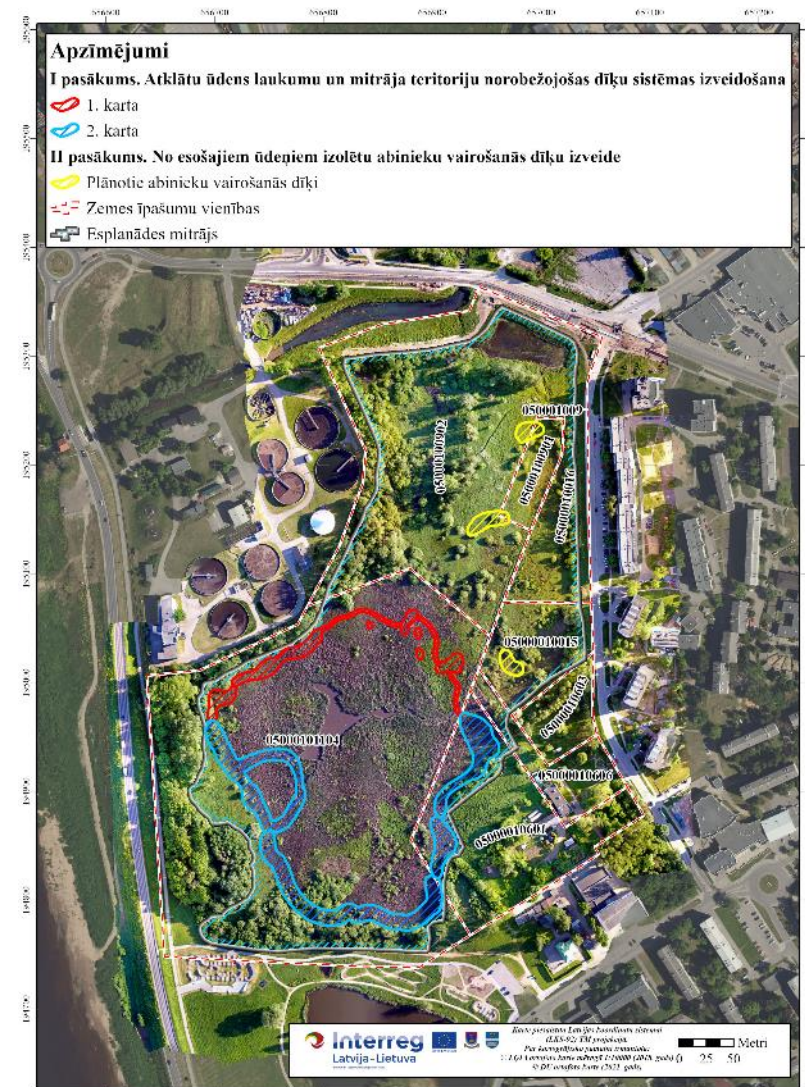
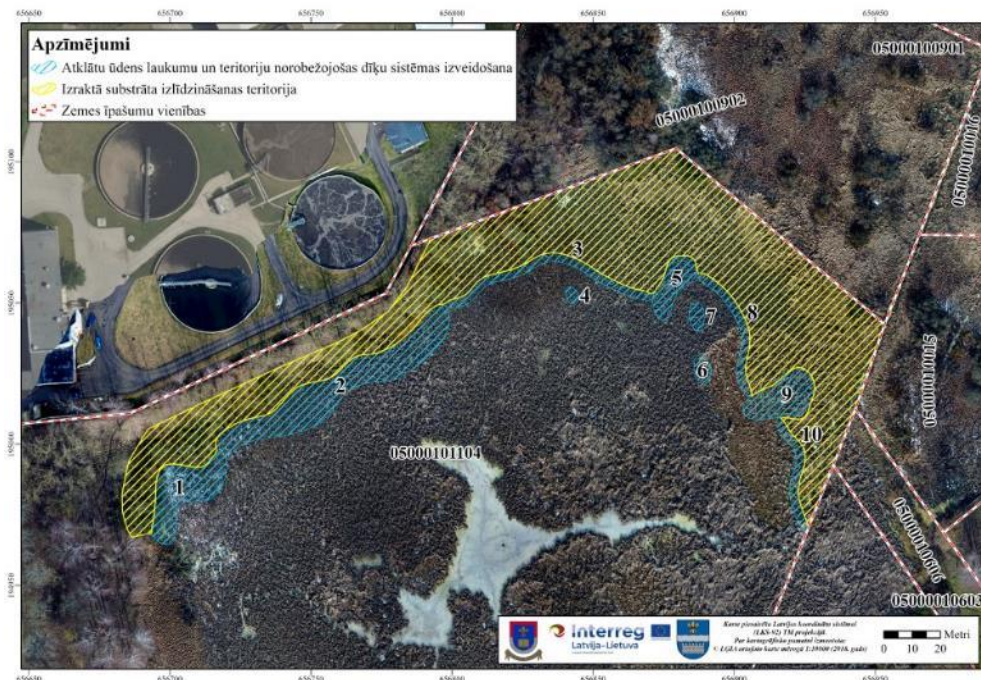
(Photo: A. Erts)



(Photo: A. Erts)

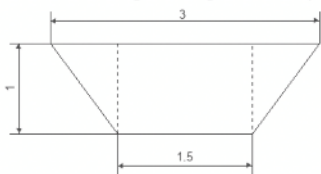
# **Recommended actions for the conservation and promotion of biological diversity in the Esplanāde wetland ecosystem and adjacent areas**

# I. & II. Construction of a united circular system of ponds around the most vulnerable territory of the wetland/Construction of isolated ponds for amphibian reproduction



## 8. Ūdens objekts (kanāls)

Plānotais kanāla profila aptuvenais šķērsgrīcums:



Izraktā grunts vienmērīgā slānī izlīdzināma un nobietējama kanālam piegulošajā teritorijā.

Kanāla dziļums	m	1
Kanāla vidējais platums	m	3
Kanāla garums	m	51,02
Kanāla plānotā atklātā ūdens laukuma platība	m <sup>2</sup>	152,11
Plānotais izrokamās grunts apjoms	m <sup>3</sup>	~114,75

Map of the planned circular system of ponds

### III. Mowing of shoots of trees and bushes

The total area of the territory where mowing shoots of trees and bushes must be implemented is 0.51 ha. The mowing of the shoots is planned to be completed this autumn.



(Photo: U. Valainis)



Planned place of implementation of management action

## IV. Cutting (thinning) of trees and bushes

Taking into account the isolation of the territory from other natural territories, the implementation of the specific management measure is planned in two rounds in order to reduce the impact on the animal species inhabiting the bushes. In the 1st round it is planned to implement works in the amount of 1.86 ha, but in the 2nd round - in the amount of 2,53 ha.



(Photo: U. Valainis)



Planned places of implementation of management action



Wetland area adjacent to the Esplanade Park before and after thinning of shrubs

## V. Restoration of biologically valuable grasslands

The existing site of the Esplanade wetland, as well as the adjacent area, has grasslands that were once used for haymaking, so the grasslands have a high restoration potential. The total area where grassland restoration is planned is 5.8 ha.



(Photo: U. Valainis)



Planned places of implementation of management action

## VI. Development of amphibian/reptile protection fence

In order to reduce the mortality of amphibians and juveniles of birds on the roads in the vicinity of the wetland, it is necessary to create protective fences in the areas defined on the map.



Sample of amphibian/reptile protection fence - an example from the adjacent territory of amphibian breeding ponds established in the vicinity of DU Study and Research Center "Ilgas" (Photo: M. Pupiņš)



Planned places of implementation of management action



## VII. Creation of artificial island for birds nesting

In order to increase the diversity of nesting and migratory bird species in the area, it is recommended to create an artificial island suitable for nesting terns (common tern *Sterna hirundo*, little tern *Sternula albifrons*), and other birds species.



Little tern *Sternula albifrons*

<https://birdwatchireland.ie/birds/little-tern/>



Planned places of implementation of management action

## VIII. Removal of the old metal fence from the territory or replacement with a new fence that fit into the surrounding landscape

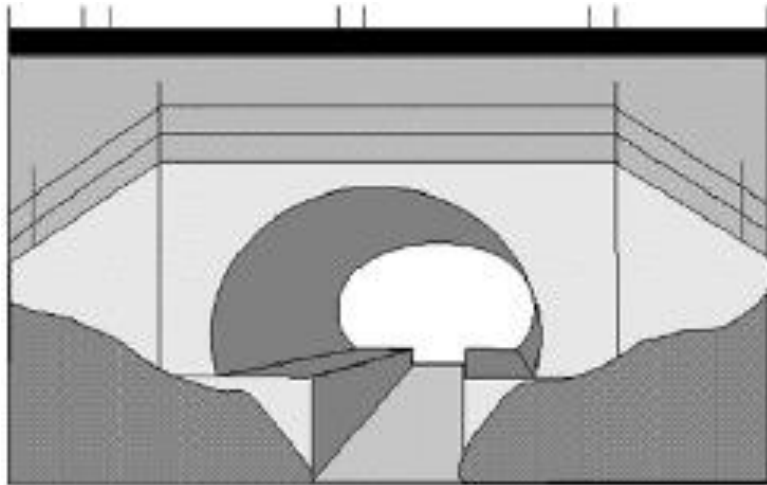


Photo: A. Erts



Planned places of implementation of management action

## IX. Adaptation of bridges crossing Šuņupe to ensure the functions of ecological corridors



<https://ciem.net/wp-content/uploads/2019/07/ha8199.pdf>

Planned places of implementation of management action

## X. Measures for limiting the spreading of invasive species



Ash-leaved maple *Acer negundo* (Photo: U. Valainis)



Himalayan balsam *Impatiens glandulifera*  
in the Esplanāde wetland  
(Photo: A. Erts)

# XI. Preparation of a technical project for ensuring a constant hydrological regime in the territory of the Esplanade wetland

- ✓ One of the possible solutions for ensuring a constant water level in the wetland and the planned pond system is the construction of dams on ditches in the northern part of the wetland.
- ✓ Before the development of the technical project, it is necessary to ensure the monitoring of seasonal changes in the hydrological regime of the territory.



Map of the drainage system in Esplanāde wetland area

## **XII. Monitoring the impact of implemented management measures**

- ✓ In order to assess the effectiveness of the management measures taken, it is recommended to ensure annual monitoring of nesting birds in the Esplanade wetland.
- ✓ When starting the management of biologically valuable grasslands, it is necessary to ensure the monitoring of the progress of grassland management. Changes in the number and quantity of vascular plant species are most often used to assess the success of grassland habitat restoration and management.

Thank You for attention!

