

30.06.2021

BOLIDEN HARJAVALTA OY

Biodiversity summary

2021



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GENERAL INFORMATION

Pirilänkoski Natura 2000 –area is located 1,5 kilometres away from the industrial area where Boliden Harjavalta operates at

- Size of the conservation area is 147 hectares (85 hectares of water areas and 62 hectares of land)
- It is a grove type area along the river

Harmful impacts to the conservation area have not been assessed. Direct impacts of Boliden Harjavalta’s operations are likely minor due to the distance between the two areas.

Location of the conservation area is acknowledged in the environmental permitting.

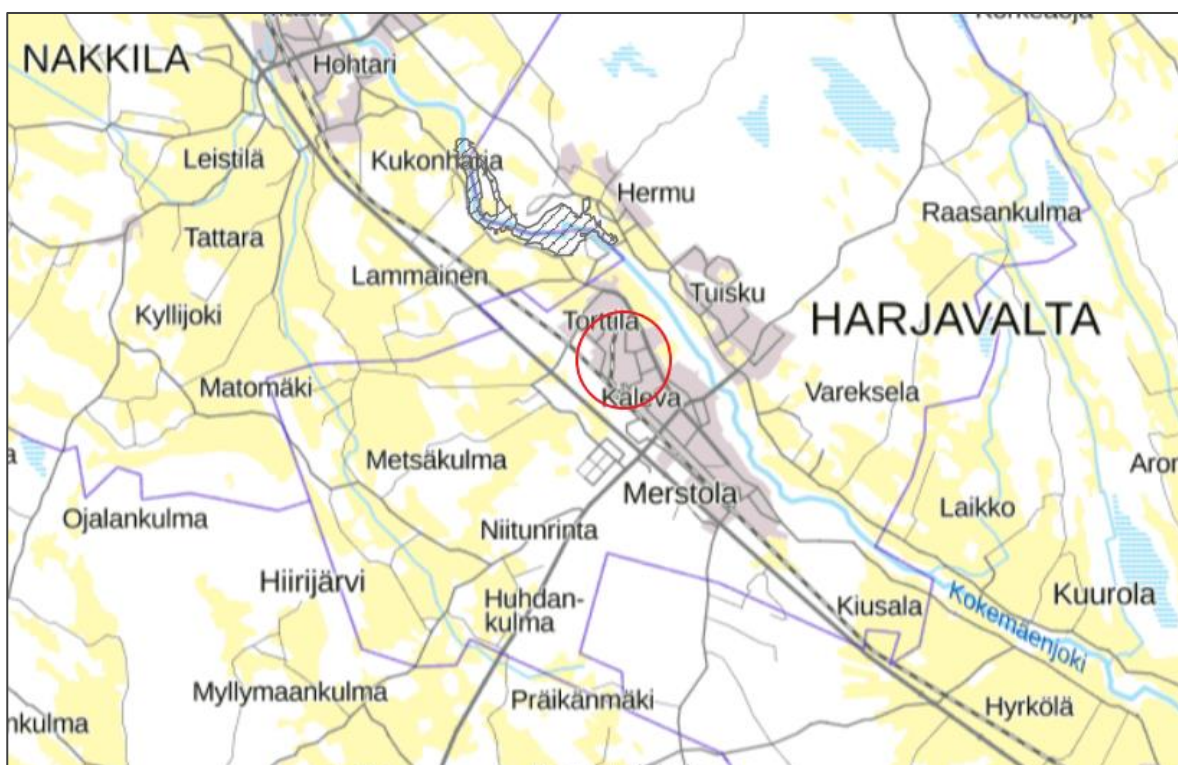


Figure 1. Location of the industrial area (red circle) and the Natura 2000 area (lined area)

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IMPACTS OF ACTIVITIES, PRODUCTS AND SERVICES ON BIODIVERSITY

Emission monitoring

- air emissions
- water discharge
- process waste monitoring
- landfill monitoring

Environmental impact monitoring

- air quality, joint monitoring
- Kokemäenjoki river water quality, joint monitoring (this includes monitoring in areas that are a part of the Natura 2000 network)
- industrial area's groundwater, perched water and surface water, joint monitoring

Other monitoring

- Sievari landfill dust deposit monitoring
- noise measurements
- bioindicator studies

Monitoring results are not directly linked to the Pirilänkoski Natura 2000 -area, but emissions and the water quality is being monitored extensively. What must be taken into account, is that there are several other industrial operators in the same area, so there are combined impacts. Also the historic operations have had an impact on the surrounding nature, the river water and the groundwater.

According to some earlier studies, the impacts of water discharge (metals) from the industrial area can be seen in the sediment and aquatic plant samples from the river, in Pirilänkoski Natura 2000 -area (source: Boliden Harjavalta's environmental permit)

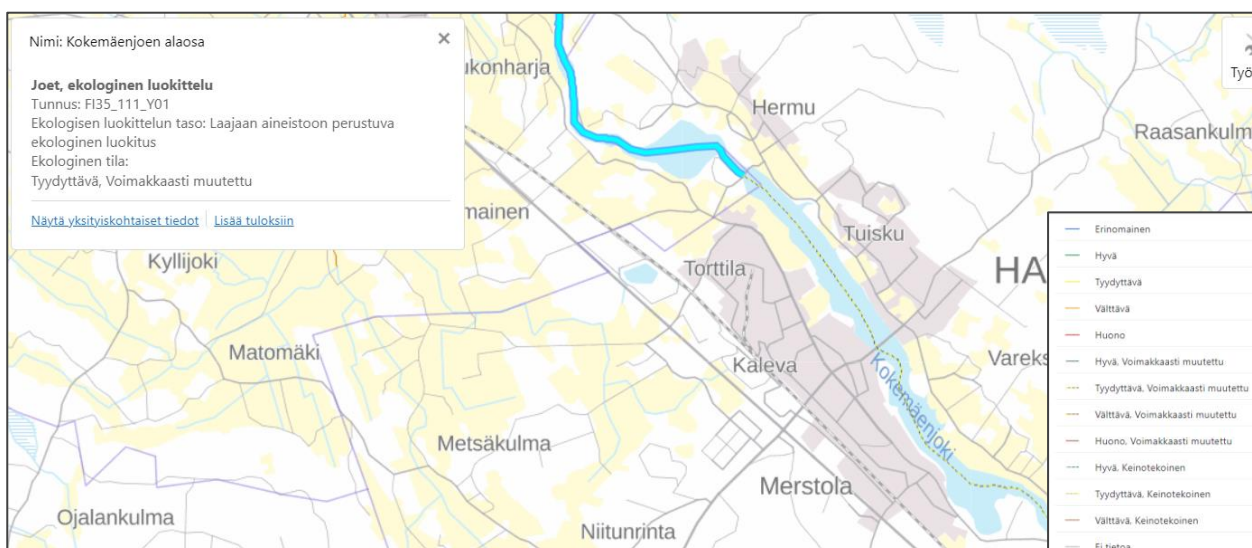


Figure 2. Ecological water quality of the river: *satisfactory, heavily modified* (Ympäristö.fi / vesikartta)

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HABITATS PROTECTED OR RESTORED

Nearest Natura 2000 -area

Pirilänkoski is located at 1,5 km distance from the smelter area

- Natura 2000 -area, SCI (Site of Community Importance)
- Total area 147 ha
- Habitat types:

Type	Code
Fennoscandian natural rivers	3210
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitri-cho-Batrachion vegetation	3260
Transition mires and quaking bogs	7140
Western Taiga	9010
Fennoscandian herb-rich forests with Picea abies	9050

- The Pirilänkoski -area also acts as an important recreational use and educational area
- Natura 2000 impact assessments regarding Pirilänkoski have been done during the environmental impact assessment projects of Sievari and Lammainen landfills (2012)
- Red list species are not listed but the endangered species are identified in the environmental impact assessment reports mentioned above
- No restorations have been done by Boliden Harjavalta

Other conservation areas nearby

- FI0200079
- Private conservation areas: YSA204061, YSA200505, YSA200575, YS
- A203226, YSA202966, YSA203615, YSA203365, YSA203225
- SSO020053

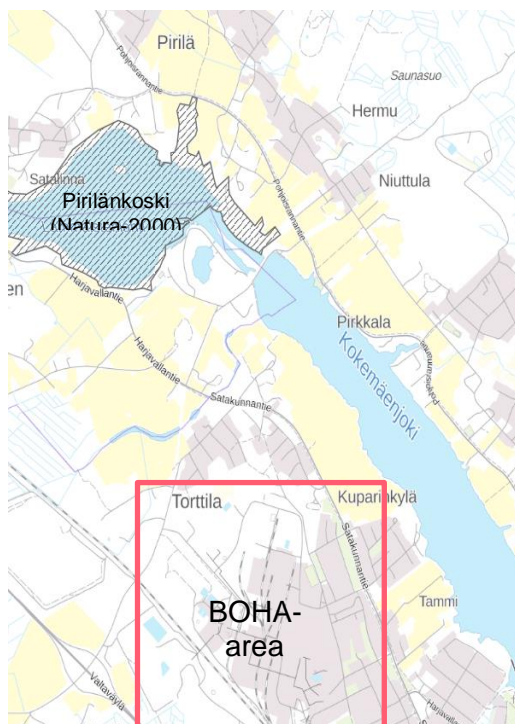


Figure 3. Location of the industrial area and the Natura 2000 area

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RED LIST SPECIES AND NATIONAL CONSERVATION LIST SPECIES WITH HABITATS IN AREAS AFFECTED

Natura 2000 impact assessments regarding Pirilänkoski have been done during the environmental impact assessment projects of Sievari and Lammainen landfills (2012).

Pirilänkoski Natura 2000 -area is located at 1,5 km distance from the smelter area

- Conservation species in the area: *Unio crassus* (thick shelled river mussel), *lutra lutra* (Eurasian otter) and *pteromys volans* (siberian flying squirrel)
- Other significant species: *alcedo atthis* (kingfisher), *cinclus cinclus* (white-throated dipper), *castor fiber* (European beaver) and *cardamine parviflora* (smallflowered bittercress)



Figure 4. *Unio crassus* (thick shelled river mussel)

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SUMMARY AND IMPROVEMENTS

Table 1. Data summary of nature conservation areas located in the vicinity of smelter

Nature conservation area located in the vicinity (Y/N)	Yes
Number of conservation areas and high biodiversity sites 2 km from smelter	1
Closest distance (kilometers)	1,5
Type of conservation area	Natura 2000 (SCI)
Total area of conservation area (ha)	147 ha
Affected conservation habitats (ha) and important habitats on conservation basis (%)	-
Number of Threatened Species on the impacted area	-
Number of Critically Endangered and Endangered species living on the impacted area	-
Smelters impact ² to conservation area is assessed (Y/N)	No (Natura 2000 impact assessments regarding Piri-länkoski have been done during the environmental impact assessment projects of Sievari and Lammainen landfills in 2012)
Impact assessment latest update	-
Is there in the environmental permit any monitoring or other requirements considering the area (Y/N)	Kokemäenjoki river water quality, joint monitoring (this includes monitoring in areas that are a part of the Natura 2000 network)

 - = *no data*

Improvements

- Creating a biodiversity action plan?
- Other next steps could be considered together with all smelters?