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THIS DECISION BECOMES FINAL ON THE DAY

19 June 201

In Varaždin, 12 October 2012

Authorized person

(signature)

Stamp:

REPUBLIC OF CROATIA

VARAŽDIN COUNTY

Administrative Department for Spatial Planning, Construction and Environmental Protection

**REPUBLIC OF CROATIA**

**VARAŽDIN COUNTY**

Administrative Department of Spatial Planning,

Construction and Environmental Protection

Class: UPI/I 351-01/10-01/33

Reg. No.: 2186/1-06/1-11-34

Varaždin, 30 May 2011

The Administrative Department of Spatial Planning, Construction and Environmental Protection of the Varaždin County, pursuant to the provision of Article 37.b, paragraph 2 of the Nature Protection Act (Official Gazette No. 70/05 and 139/), and Article 29, paragraph 1 of the Ordinance on the Appropriate Assessment of the Impact of Plans, Programmes and Projects on the Ecological Network (Official Gazette No. 118/09), regarding the main assessment of impact on the ecological network for the project “Rehabilitation of the dam and sediment removal from Lake Trakošćan”, at the request submitted by Hrvatske vode, Water Management Branch Office “Plitvica-Bednja”, Međimurska 26b, Varaždin, is passing the following

**DECISION**

**I.**

Hrvatske vode, Water Management Branch Office “Plitvica-Bednja”, Međimurska 26b, Varaždin, is permitted to implement the project “Rehabilitation of the dam and sediment removal from Lake Trakošćan”, in the Municipality Bednja, Varaždin County, cadastral municipality Trakošćan, in such manner that both interventions are executed simultaneously and together, in accordance with the main assessment of impacts of both interventions on the ecological network.

**II.**

The project “Rehabilitation of the dam and sediment removal from Lake Trakošćan Lake” is permitted with implementation of the Measures for mitigating adverse impacts on the ecological network and Monitoring programme of the state of conservation objectives of the ecological network, in accordance with the *Report about the main assessment of impacts on nature of the project “Rehabilitation of the dam and sediment removal from Lake Trakošćan”,* Institut IGH d.d., Zagreb, February 2011.

**III.**

Disposing of silt on the landfill D3 is excluded from the project to conserve the habitat integrity of mesophile hay meadows and wet meadows of the Central Europe, and to conserve the strictly protected species Siberian iris (*iris sibirica*), which is protected by the Ordinance on proclaiming wild taxa protected and strictly protected (Official Gazette No. 99/09), all in the ecological network area HR2000366 Bednja.

**IV.**

Hrvatske vode, Water Management Branch Office “Plitvica-Bednja” is issued the following:

A.1 Measures for mitigating adverse effects of the project of the rehabilitation of the dam and restoration of the cascade chute on the conservation objectives and integrity of the ecological network area

Protection measures during works on the dam rehabilitation and restoration of the cascade chute:

1. Preliminary activities and rehabilitation of the dam and restoration of the cascade chute must be carried out at the end of summer and during autumn.

Protection measures during preliminary works on the dam rehabilitation:

2. Prior to discharge of water from Lake Takošćan, it is necessary to construct temporary 'dams' on 4 coves of the lake which will not be cleaned, so that amphibians and reptiles are not left on dry surface. Design solution for temporary 'dams' must be a part of the detailed design.

3. Fish stock removed from Lake Trakošćan may in no case be transferred to the Bednja watercourse or any other watercourse i.e. other natural or near natural waters. Regarding the removal of fish stock, it is necessary to timely inform the local fishing association (ŠRD Trakošćan) about the date when water will be discharged from the lake, so that they could timely prepare and participate in fish stock removal.

4. Prior to start of works, the location where works will be performed must be fenced off in a manner to protect animals from entering the working area.

5. In advance define the location for disposal of material and waste which is at a sufficient distance from the lake.

6. Waste should be disposed of in legally prescribed manner.

7. Prior to start of works, define paths for movement of machinery in order to protect the surrounding area and forest edges.

8. Maximally avoid cutting of trees or bushes for transport purposes.

9. Take maximum care to avoid spilling or seepage of harmful fluids, collapse of banks of the lake, or uncontrolled or accidental dumping of materials on the banks or bottom of the lake.

10. All other materials: fuels, lubricants, solvents, etc. should be stored and used in the legally proscribed manner.

11. During works, ensure a sufficient number of chemical toilets, with regular emptying, by an authorized company.

12. Prepare a contingency plan for the construction site in case of possible accidents in the area of the intervention (in case of an obligation pursuant to Article 254, paragraph 1, item 11 of the Spatial planning and construction act (Official Gazette No. 76/07, 38/09 and 55/11).

Protection measures during the dam rehabilitation:

13. During works, strictly pay attention that the machinery and human actions do not endanger the surrounding amphibian habitats outside the 44 m bank line within which the works are planned.

14. All animals which may cross the fence must be returned to the area outside of the intervention.

15. Take maximum care to avoid spilling or seepage of harmful fluids, collapse of banks of the lake, or uncontrolled or accidental dumping of materials on the banks or bottom of the lake.

16. Take care that the works do not endanger edges of the forest habitat.

Protection measures during construction and topsoiling of the dam slope:

17. The dam slopes must be constructed according to the design documents where terrain slopes should simulate habitat conditions prior to the intervention, so that habitats could renew as soon as possible after the intervention, all with a purpose to protect amphibian habitats which are characterized by therophyte vegetation adapted to the exchange of flooded and dry phases of the surface, and whose species develop at the time of the “dry phase” in summer, and tolerate occasional flooding.

Protection measures during restoration of the cascade chute:

18. The cascade chute should be restored in a manner to restore the regime of the watercourse prior to the present situation, according to the design documents which should in their solution simulate the regime without water losses, so that conservation objectives of the ecological network Lake Trakošćan could be achieved after the intervention.

Protection measures during rehabilitation of the wooden bridge:

19. During the rehabilitation of the bridge, take care to avoid endangering of species in the surrounding area and on the lake bottom.

20. Take maximum care to avoid spilling or seepage of harmful fluids, collapse of banks of the lake, or uncontrolled or accidental dumping of materials on the banks or bottom of the lake.

21. For disposal of waste material use the same disposal sites which were determined for earlier works.

Protection measures during casing of concrete parts with stone:

22. During works, ensure that stone from the surrounding area is used for casing.

23. Case the surfaces with stone in a manner that the surface of the wall looks natural after the intervention.

Protection measures during terrain improvement after the completion of works:

24. After the completion of works, return to the original state not only the bank habitats in the length of 44 m, but also the entire working area.

A.2 Measures for mitigating adverse effects of the project of the sediment removal from Lake Trakošćan on the conservation objectives and integrity of the ecological network area

Protection measures for mechanical sediment removal from Lake Trakošćan:

25. In the framework of the detailed design, consider the possibility of the using sediment for disposal on agricultural surfaces or for biogas generation to avoid its disposal on locations D1 and D2.

26. All preliminary activities for sediment removal must be carried out during summer and autumn, and sediment removal itself during winter.

Protection measures during water discharge from the lake and preparation for sediment removal:

27. Prior to discharge of water from Lake Takošćan, it is necessary to construct temporary 'dams' on 4 coves of the lake which will not be cleaned, so that amphibians and reptiles are not left on dry surface. Design solution for temporary 'dams' must be a part of the detailed design.

28. Fish stock removed from Lake Trakošćan may in no case be transferred to the Bednja watercourse or any other watercourse i.e. other natural or near natural waters. Regarding the removal of fish stock, it is necessary to timely inform the local fishing association (ŠRD Trakošćan) about the date when water will be discharged from the lake, so that they could timely prepare and participate in fish stock removal.

29. Water discharge should be performed during summer so that sediment could dry better, and also because processes of decomposition of organic substances and the process of mineralization of organic nitrogen into inorganic nitrogen are faster on higher temperatures, which would significantly increase the possibility of sediment use.

30. During preparation of the location for the start of works in the upstream part of the lake and construction of the drainage canal, the width of area for entrance and exit of vehicles must be reduced to the lowest possible measure to protect the surrounding habitats.

Protection measures during sediment removal from the bottom of Lake Trakošćan:

31. During mud removal, exclusively use places for hauling out mud in the upper part of the lake.

32. Spilling or seepage of harmful fluids on the banks or bottom of the lake must not occur.

Protection measures during construction of disposal sites for removed sediment:

33. During preparation of the terrain, adhere to the design documentation and pay attention to protection of the area of the surrounding habitats.

34. Pay maximum attention to drainage of seepage water and storm water from disposal sites and its treatment as planned in the design documents according to conservation goals of the ecological network.

35. After completion of works of sediment disposal, return the surrounding area to its original state; return the surface layer of the cover to disposal sites, including autochthone plant species from the surrounding area capable of vegetative reproduction.

Protection measures during construction of the settling tank for sediment from the Čemernica stream:

36. The intervention of relocation of a part of the Čemernica watercourse should be limited exclusively to the length of the stream of 360 m. After returning the watercourse into its original position, the banks must not be cased with stone or any other material beside the excavated material and surface layer of the soil to facilitate natural return of autochthone vegetation.

37. The detailed design should enable that the settling tank removes not only the large material which may be brought by torrential waters, but also the majority of suspended matter from the watercourse.

Protection measures during construction of the constructed wetlands for treatment of wastewater from the Čemernica stream:

38. During defining of the surface of the lagoon with plant material, maximally use the possibility of including existing surfaces on the location, which was a part of the constructed wetlands before.

39. When selecting substrate for planting vegetation in the lagoon, use substrates which will also serve as protection from seepage of organic pollution under the ground.

40. The constructed wetlands must be maximally shaped and functionally fit into the existing surrounding.

Protection measures during the final phase of the works (after sediment removal):

41. After completion of works, the area of the intervention return to the original state as much as possible.

42. Consider the possibility of removing the sediment from the locations of the site disposals D1 and D2 to return the terrain into the original state, e.g. for disposal on agricultural surfaces or for biogas generation.

43. During restocking of the lake, pay strict attention to use the species which will assist with regulation of the lake vegetation growth and long-term reduction of degree of trophy. Proscribe permitted quantity of fish spawn for each species which can be brought into the lake considering its volume.

**V.**

Hrvatske vode, Water Management Branch Office “Plitvica-Bednja” is committed to implement the following Monitoring programme of the state of conservation objectives of the ecological network, both during and after the performance of works:

Monitoring programme of the ecological network on the location Čemernica:

- After completion of the intervention and remediation, determine the conservation objectives of the ecological network of hydrophilic edges of tall greens plants along the river and forest (Convolvulion sepia, Filipendulion, Senecio fluviatilis) and monitor seasonally in the first 3 years after the project, and later in annual intervals.

- Monitor water quality of the watercourse according to the existing monitoring plan and legally proscribed obligations.

- Monitor efficiency of the constructed wetlands for wastewater treatment according to the Ordinance on limit values of hazardous and other substances in wastewater (Official Gazette No. 94/08).

- If sediment is removed from the locations of disposal sites D1 and D”, again carry out remediation of the locations and monitor renewal of conservation objectives of the ecological network.

Monitoring programme of the ecological network on the location Lake Trakošćan:

- Monitor renewal of amphibian habitats of Isoeto-Nanojuncetea in the area of the dam rehabilitation (in the length of about 44 m), and upstream at the place of sediment removal (in the length of about 20 – 30 m) seasonally in the first 3 years after the project, and later in annual intervals.

- Monitor water quality of the watercourse according to the existing monitoring plan and legally proscribed obligations.

- Monitor the process of aquatic vegetation renewal in annual intervals.

- Control the input of fish species and quantities after the intervention.

Monitoring programme of the ecological network on the location Bednja:

- Monitor the abundance of Siberian iris species in the ecological network area HR2000366 Bednja after the completion of the process of sediment disposal and remediation of the terrain seasonally in the first 3 years after the project, and later in annual intervals.

- Monitor the renewal of habitats of mesophile hay meadows and wet meadows of the Central Europe in the ecological network area HR2000366 Bednja after the completion of the process of sediment disposal and remediation of the terrain seasonally in the first 3 years after the project, and later in annual intervals.

- Monitor water quality of the watercourse according to the existing monitoring plan and legally proscribed obligations.

- Establish a monitoring plan for species, whose goal is the protection of the ecological network of the area HR2000366 Bednja.

**VI.**

The developer shall appoint a responsible person and through this responsible person ensure the compliance with all mentioned Measures for mitigating adverse effects on the ecological network area and Monitoring programme of the state of conservation objectives of the ecological network.

The data on the responsible person (name and surname, telephone number) as well as data about the start of works shall be submitted, prior to the start of works, to the Ministry of Culture - Directorate for Nature Protection Inspection and the Public Institution for the Management of Protected Natural Values in the Varaždin County.

**Grounds for decision**

Hrvatske vode, Water Management Branch Office “Plitvica-Bednja”, submitted on 17 November 2010 to this Administrative Department a request for main assessment of impact on the ecological network for the project “Rehabilitation of the dam and sediment removal from Lake Trakošćan”.

On 26 November 2010, the request is supplemented for the first time, and with the second supplement of 30 November 2010, pursuant to Article 30 of the Ordinance on the Appropriate Assessment of the Impact of Plans, Programmes and Projects on the Ecological Network (Official Gazette No. 118/09, hereinafter: the Ordinance), it was considered complete and correct.

Pursuant to Article 22 of the Ordinance, this administrative body published the information for the public about the submitted which remained published for 30 days on the web page of the Varaždin County.

In the procedure of main assessment, pursuant to Article 37.b, paragraph 3 of the Nature Protection Act (Official Gazette No. 70/05 and 139/08; hereinafter: the Act), this Administrative body requested on 30 November 2010 the preliminary opinion of the State Institute for Nature Protection, which was received on 23 December 2010 (Class: 612-07/10-29/56, Reg. No.: 366-07-3-10-4 of 16 December 2010). According to the opinion, the State Institute for Nature Protection agrees with the proposal of the conclusions of the main assessment, with inclusion of four remarks which should be included in the final implementation of the project.

On 8 February 2011, the letter of Hrvatske vode was received in which, due to the need for supplementation of the report of the main assessment, they request extension of the deadline for implementation of the procedure which can last until 30 March 2011. Pursuant to Article 30, paragraph 3 of the Ordinance, for the purpose of performing of additional activities, the deadline for implementation of the procedure was extended for 2 months until 30 May 2011.

Hrvatske vode submitted on 7 March 2011 the supplemented report of the main assessment, with a Summary of the report, about which the opinion of the State Institute for Nature Protection was again requested.

On 24 March 2011, the Final opinion of the State Institute for Nature Protection (Class: 612-07/10-29/46, Reg. No.: 366-07-3-11-2 of 18 March 2011) according to which “the study has adequately processed the requested remarks and included them into the proposal of measures for mitigating adverse effects of the project on the conservation objectives and integrity of the ecological network area.”

In the Final opinion, it is stated that the State Institute for Nature Protection agrees with “the conclusion of the main assessment that the planned project Rehabilitation of the dam and sediment removal from Lake Trakošćan, with implementation of all proscribed protection measures, will have no significant negative impact on the conservation objectives and integrity of the ecological network area.”

After receipt of the Final opinion, this Administrative body conducted, pursuant to Articles 21-26 of the Ordinance, a public inspection of the Report of the Main assessment, about which a report on public inspection was composed, which contains: information about the public inspection, invitation to public presentation, minutes from the public presentation with a list of participants and the book of remarks, with four remarks (Ministry of Culture -

Directorate for Nature Protection Inspection, Public Institution for the Management of Protected Natural Values, Castle Trakošćan and Hrvatske šume), and the response of Hrvatske vode as the project developer.

In its response, Hrvatske vode, in cooperation with the developer of the main assessment report, Institut IGH d.d., and pursuant to Article 20, paragraph 2 of the Ordinance, proposed the final measures for mitigating adverse impacts on the ecological network and the programme for monitoring the state of ecological network’s conservation objectives.

Based on the inspection of the environmental impact report of the main assessment and the Final opinion of the State Institute for Nature Protection, this Administrative body determined the following:

The project includes lake Trakošćan, surface approximately 17.1 ha and the surfaces on which site disposals will be constructed. lake Trakošćan is integral part of the protected forest park and the planned nature park Hrvatsko zagorje (or planned regional park Trakošćan), and is located within the ecological network area HR2000852 Čemernica, HR2000802 Trakošćansko jezero (Lake Trakošćan), HR2000366 Bednja and HR1000007 Hrvatsko zagorje.

About 135,000 m3 of sediment need to be removed from the lake. The planned project, considering its technical characteristics, is divided into two parts: a) dam rehabilitation, and b) sediment removal from the lake, both of which were considered in the report to be executed simultaneously and together.

a) Dam rehabilitation:

To restore the cascade chute and the bottom outlet, a part of the cross section should also be reconstructed. The cross profile consists of a wall on the water side, and earth material on the supporting side. The wall reconstruction is necessary in the length of about 44 m. Along the wall, it is necessary to rammed clay. The dam profile should retain the existing dimensions, with improved walk on the crown. The slopes must be topsoiled, and over the chute a wooden bridge must be built.

The purpose of the intervention is to improve the water regime because of the deterioration and occasional water losses due to overflow, which is unfavourable in the long term for conservation objectives of the ecological network area HR2000802 Trakošćansko jezero. It is considered that the implementation of the project will have a temporary impact on the conservation objectives, but this impact will be mitigated and is slight in comparison with the long-term improvement of habitat conditions, which would be achieved by the project implementation.

b) Sediment removal from the lake:

The cleaning of the lake is planned in a manner that the lake is fully emptied and left dry so that the sediment dries (or freezes) to the degree necessary for removal by inland machinery. After this, the sediment would be transported to disposals sites.

During sediment removal form the lake, to reduce the degree of trophy, up to 20% of the lake surface will be left not cleaned to retain a part of plant, animal and microbiological population of the lake. Cleaning will not be carried out in 4 coves of the lake (about 15% of the surface) for the purpose of survival of amphibians and reptiles, strictly protected and protected species pursuant to the Ordinance on proclamation of wild taxa as protected and strictly protected (Official Gazette 99/09).

The detailed design will anticipate and elaborate the manner in which the temporary dams for retaining of water in the coves at the height of about 0.5 m will be executed, which was not planned in the preliminary design.

The analysed components of sediment samples do not exceed the limit values of parameters prescribed in the Ordinance on the protection of agricultural land against pollution caused by harmful substances (Official Gazette 15/92).

For final disposal of sediment form the lake, the main assessment report anticipated three disposal sites: D1: the valley of a stream in the basin upstream of the lake, D2: the valley of a stream in the basin upstream of the lake, and D3: the Bednja river valley north of the castle Trakošćan.

The disposal sites D1 and D2 are located in the existing valleys (ravines) of streams in the basin, upstream of lake Trakošćan. The disposal sites are constructed with trapezoidal cross sections. In order to prevent material flushing from the disposal sites and its return to the lake, linings are laid on the site slopes and lateral drainage canals are constructed. The disposal sites are shaped in a manner that they maximally fit into the environment, and in the existing protected area. The height in the disposal sites D1 and D2 is 1.2 m, with 1:2 slopes.

The predicted impact is reacted to the period of project duration and sediment disposal. Due to transport of sediment, terrain will rise, which will affect the change of habitat microconditions on the sites. A mitigating circumstance is that seepage water from the site could, to a certain degree, ensure the humidity of habitats around the disposal sites, which is an important factor for conservation of the ecological network.

The locations of the disposal sites D1 and D2 are selected due to good traffic connections with the lake and favourable terrain configuration, and the selection was made based on consultations with representatives of the competent institutions.

This Decision does not permit sediment disposal on the disposal site D3 which includes a surface of mesophile hay meadows and wet meadows, which are also the habitats of Siberian iris (iris sibirica). The conservation of the Siberian iris habitats represents the conservation objectives of ecological network area HR2000366 Bednja, and this species represents a strictly protected species pursuant to the Ordinance on proclaiming wild taxa protected and strictly protected (Official Gazette No. 99/09).

In case of impossibility to find another favourable replacement location for the location D3, the investor should, already in the framework of the detailed design, consider the possibility of utilizing sediment on agricultural surfaces or for biogas generation, which would be optimal, long-term solution for conservation objectives of the areas HR2000852 Čemernica, and HR2000366 Bednja.

Based on the above, the administrative body, at the request of the project developer, and pursuant to Article 37.b, paragraph 2 of the Nature Protection Act (Official Gazette 70/05 and 139/08) and article 29, paragraph 1 of the Ordinance on the Appropriate Assessment of the Impact of Plans, Programmes and Projects on the Ecological Network (Official Gazette No. 118/09), decided as in the text of the Decision.

INSTRUCTION ON LEGAL REMEDY:

Against this Decision a complaint can be instituted to the Ministry of Culture. The complaint is submitted within the period of 15 days from the date of receipt of this Decision to the Administrative Department of Spatial Planning, Construction and Environmental Protection, Franjevački trg 7, Varaždin, in person or by post, or may be verbally declared to the minutes.

Pursuant to Article 7, paragraph 19 of the Administrative Fees Act (Official Gazette No. 8/96, 77/96, 95/97, 131/97, 68/98, 66/99, 145/99, 30/00, 116/00, 163/03, 17/04, 110/04, 141/04, 150/05, 153/05, 129/06, 117/07, 25/08, 60/08 and 20/10), the administrative fee is not paid for documents and actions related to protection on cultural heritage.

REPUBLIC OF CROATIA

VARAŽDIN COUNTY

Administrative Department Spatial Planning,

Construction and Environmental Protection (stamp)

Head of Department Danijel Meštrić, M.Sc.C.E.

(signed)

To be delivered to:

1. Hrvatske vode, Water Management Branch Office “Plitvica-Bednja”,

Međimurska 26b, Varaždin

2. Ministry of Culture, Nature Protection Directorate,

Savska cesta 41/20, Zagreb

3. State Institute for Nature Protection,

Mažuranićev trg 5, Zagreb

4. Public Institution for the Management of Protected Natural Values in the area of the Varaždin County,

Kratka 1, Varaždin

5. Ministry of Culture, Directorate for Nature Protection Inspection,

Gundulićeva 2, Varaždin

6. Institut IGH d.d.,

Janka Rakuše 1, Zagreb

7. Archives, here