1. Non-technical summary of Environmental impact assessment

This report constitutes the Environmental Impact Assessment Statement (EIAS)elaborated for the preliminary design phase for the reconstruction of Aruvalla –Kose Section (km 26.6 – 40.0) of Tallinn – Tartu – Võru - Luhamaa Road.

The Project Developer and the decision-maker is the Estonian National Road Administration The Environmental Impact Assessment Statement was elaborated by Rein Kitsing (AS Merin, local expert) and Steffen Brøgger-Jensen (COWI, Denmark)

The EIAS reports on the Environmental Impact Assessment (EIA) procedure has been conducted according to the Estonian EIA legislation, 'Environmental Impact Assessment and Environmental Management System Act' (February 2005).

The purpose of the Environmental Impact Assessment is to provide a description of the expected environmental effects of the project and to suggest solutions and mitigative measures for avoiding permanent negative impacts of the project on the environment.

The EIA has been based on a thorough assessment of existing data and documentation, as well as additional fieldwork in the project area.

The project area comprises the middle area of Kose Municipality and the boundary area of Rae Municipality. The existing road section from Aruvalla (km 26.6) had single line both direction. The road section consists of Saula Bridge over Pirita River and Kuivajõe Bridge over Kuivajõe River. The Road does not conform to the requirements arising from increasing traffic frequency and load.

The preliminary design provides the following solutions for Road section:

1. Widening of the existing road section to right with the new alignmentof two lines from Aruvalla to Kolu crossing and to the left along to endkm 40 ahead of Kose-Risti.
2. The new bridges of rivers Pirita and Kuivajõe.
3. The new crossings of Kolu and Kuivajõe with local roads

There is the rare settlement alongside of the Road section, less some houses are located close to the road. The road crosses through the woodland and agriculturelandscape. The major forestry is beside of Pirita River, on Kolu and on Kose-Risti end of the road section.

At this stage the EIA has provided the following overview of anticipated effects and impacts of new and upgraded road sections:

***Physical conditions and soil**:* No environmentally negative impacts are foreseen, despite some earthworks to be carried out.

Surface water: River Pirita and waterless bed of river Kuivajõe are sensitive surface water bodies, which need considerations both during construction and operation. Constructions on bridges and other structures at and near rivers may pose the most obvious risk, as activities at and near rivers may cause accidental and hazardous spills.

Surface water run-off from bridges over River Pirita and Kuivajõe and from road areas must be controlled to prevent into water bodies. Collected drainage water should be lead through a buffering wetland or pond, instead of directly into the recipient.

***Ground water**:* No impacts are foreseen. Except the accidents with the loads of hazardous matter (especially liquids), whish may soak to the upper ground when will be delayed with clearing of the spills.

***Air quality**:* A higher traffic density inevitably means larger air pollution. Two factors count for a reduced air pollution, however: An improved traffic flow because of better road conditions will decrease emissions, and improved combustion systems on the cars to be expected on Estonian roads in the future will also contribute to lower emission rates per vehicle.

***Land use and land tenure**:* The reconstructed road will have some impacts in the areas and will require new land where new road section, collector roads and interchanges will be constructed.

***Habitats**:* A possible new road section do not influences protected areas in the demesne. The road crosses through the green corridors of the green network at the banks of the Pirita River, on Kolu and Kose-Risti. The constructions (Kolu ecoduct) and other measures (road fences at Pirita River) at the grossing track of the animals have been planned.

At the planned road widening new land will be required, but these areas hold no habitats of particular value.

The willow plots are self-recoverable. After the end of the road construction works and in case the road edges are not maintained, the willows will spread back to the road edges from surrounding areas with few years. Also the grass communities will recover by natural means.

Noise: The computational noise level number of 74 dB is currently over the limit (60 dB), specified by Estonian authorities at the residential houses close to the road. The calculated noise level of the traffic for 2030 will increase about 2- 3 dB due to increased traffic intensity and in case the noise level of the individual vehicles will be same as today. The effects of the noise emission will have to be reduced.

Hazards: Improved road conditions and safe road crossings and junctions will decrease the risk for accidents. In all it is expected that the project will lead to an improved road safety.

Recreation: A better separation of traffic types is likely to improve the conditions for recreational movements and 'soft traffic' within the project area after the construction.

Cultural and natural heritage**:** No impacts are foreseen.

Design solutions

The existing road will be used as one roadway direction of the new class I reoad. Up to km 32.0, the additional carriageway width shall be placed to the right and to the left between km 33,5-40 up of the existing one.
The bridges Saula of the River Pirita and Kuivajõe of River Kuivajõe will be reconstructed. The new interchanges crossing with local roads at the Saula bridge, in villages Kolu, Kurena, Kuivajõe and Liiva will be constructed.

Conclusions

In general, the environmental impacts expected by an execution of the planned project remain moderate as the upgraded road will stay partly within the existing road corridors. The new natural or semi natural lands will be needed for planned road widening and interchanges and the existing landscape and land use will be changed there. As a result of the estimation of the preliminary design the mitigation measures of the negative environmental impact have appeared, which have been considered in preliminary design and be necessary to settle in the detailed design and to implement in construction.