

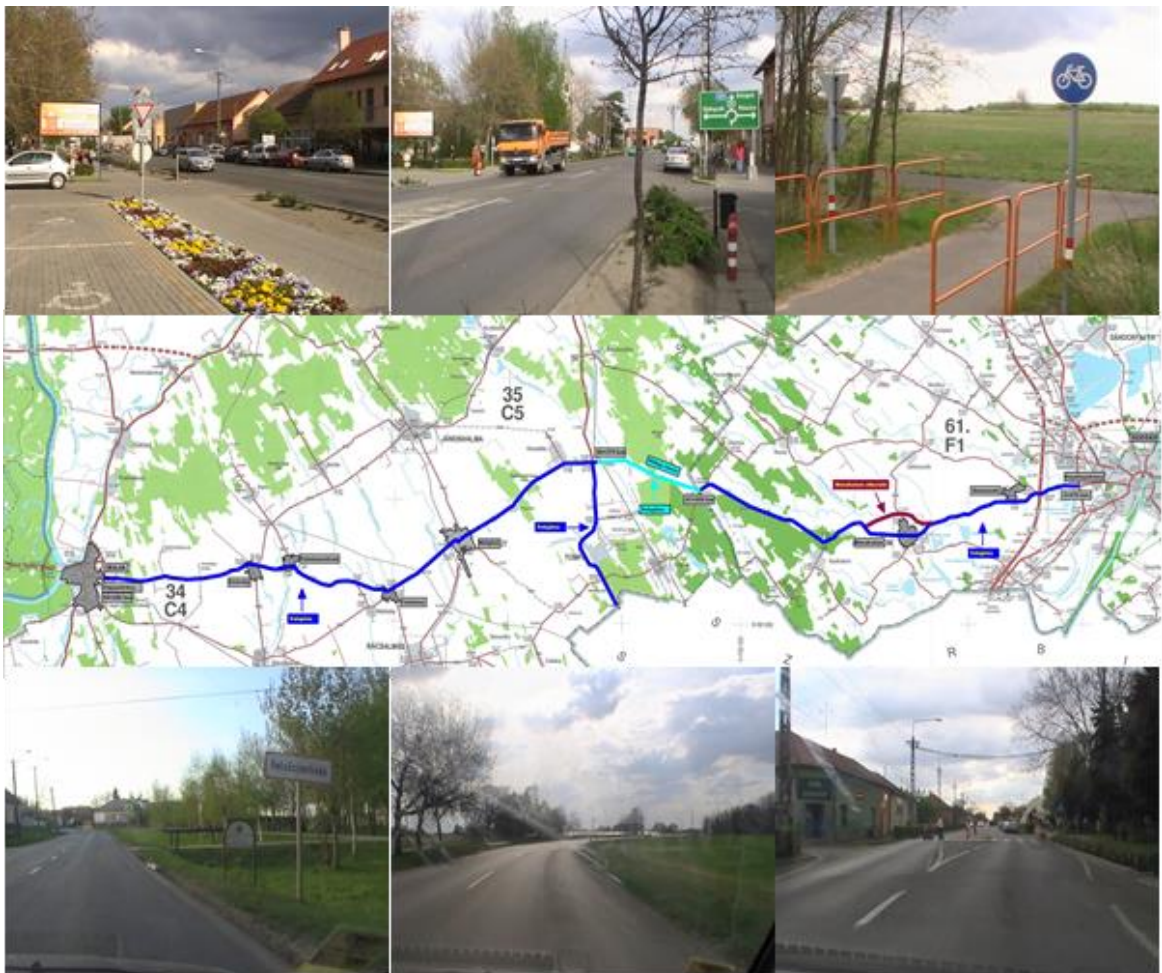


**Transinvest
Budapest**

**The preparation of supplementary documentation
necessary for the grant of support of the European
Regional Development Fund regarding the pavement-
reinforcement of main road no. 55 sections between
Szeged bypass and Baja bypass and construction of
Mórahalom bypass**

Application for Support

ANNEX No. III.: NON-TECHNICAL SUMMARY



Budapest, October, 2013.

Transinvest-Budapest Kft.

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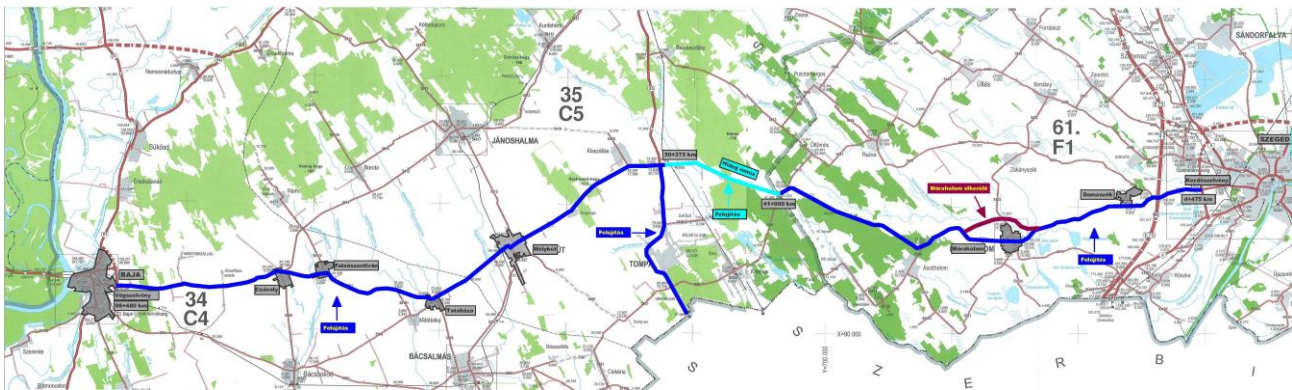
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11, 5t pavement reinforcement of main road no. 55 section Szeged - Baja bypass (between segments 4+475 – 98+480 km) and main road no. 53 section between main road no. 55 and national border and for the construction of the parallel cycleway

ENVIRONMENTAL SUMMARY

EXECUTIVE SUMMARY



JUNE 2013.

11, 5t pavement reinforcement of main road no. 55 section Szeged - Baja bypass (between segments 4+475 – 98+480 km) and main road no. 53 section between main road no. 55 and national border and for the construction of the parallel cycleway

ENVIRONMENTAL SUMMARY

EXECUTIVE SUMMARY

Principal: TRANSINVEST - Budapest Ltd.
Vibrocomp Ltd. subject number: 44/2012

Made by:



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SZKV-1.1. Waste management environmental protection expert

SZKV-1.2. Air cleanliness protection environmental protection expert

SZKV-1.3. Water and geological medium protection expert

SZKV-1.4. Noise and vibration protection expert

OKTVF id: Sz-035/2009

SZTjV landscape conservation

SZTV Protection of geological natural values and caves

Nerpel Szabolcs

Engineer specialised in Geographic information systems

Bencsik Tímea

Certified landscape architecture engineer

MMK id: 01-14704

SZKV-1.1. Waste management environmental protection expert

SZKV-1.2. Air cleanliness protection environmental protection expert

SZKV-1.3. Water and geological medium protection expert

OKTVF id: Sz-010/2013.

SZTjV landscape conservation

SZTV Protection of geological natural values and caves

Szénási Valentin

Certified biologist

Budapest
- 2013 -

EXECUTIVE SUMMARY

TRANSINVEST - Budapest Kft. won the public procurement procedure to prepare the necessary document to obtain the support of the Transport Operational Programme for the 11,5 t pavement reinforcement of main road no. 55 section Szeged - Baja bypass (between segments 4+475 – 98+480 km) and main road no. 53 section between main road no. 55 and national border and for the construction of the parallel cycleway. Part of the support application of the major project is the preparation of the Environmental Summary. TRANSINVEST - Budapest Kft. as the general designer commissioned Vibrocomp Kft. to prepare it.

The Necessity of the Project

December 2006 the Hungarian Government approved the Transport Operational Programme for 2007-2013. It contains the pavement reinforcement for 115 kN axle load of section of main road no. 55 in order to improve the regional access.

The objective of the improvement is to ensure the load rating requirements of the allowed axle load 115 kN on the examined section of main road no. 55., the improvement of the traffic safety and evolving unified pavement conditions.

Environmental and Construction Permit, Information of the Public

The preparation of environmental permit available for most of the sections under this documentation was not necessary, only closing decree of the preliminary examination procedure was issued, except for Mórahalom bypass road. Regarding Mórahalom bypass section, based on Government Decree 20/2001 (II. 14.), prepared a preliminary environmental impact assessment was prepared, on which basis the environmental protection permit was issued by the Lower-Tisza Environmental, Nature protection and Water Inspectorate in July 2007. Environmental permit number: 27658-1-18/2007. The involved town was informed about the environmental protection procedure, the environmental protection documentation and announcement was possible to inspect at the municipality of Mórahalom.

In case of Mórahalom bypass section the environmental permit will expire on 12th January 2014, therefore, in order to obtain the extension of the permit an environmental impact study level examination will be prepared with the actualization of previously made assessments and testings, which will be submitted to the environmental authority before the expiry of the permit.

The EU directives conform changes in Hungarian legislations justified the unified study of the environmental angles of the sections affected by the 11,5 t pavement-reinforcement, the preparation of a preliminary study documentation. The preparation of the preliminary study documentation is justified by the European Union directives as well, since the project is classified to the development class determined by the Council Directive 85/337/EEC on Environmental Impact Assessment (EIA) in Annex II.

According to the closing decree, ref. 93952-1-36/2013, of the preliminary examination procedure issued by the Lower-Tisza Environmental protection, Nature protection and Water Inspectorate, the construction of the 11,5 t pavement-reinforcement of the section of main road no.55 between Szeged-Baja (ch 4+475 km – ch 98+480 km)

and main roads no. 53, no 55 and between the border and the parallel bicycle road does not result in significant environmental impacts, therefore the commencement of these activities do not require an environmental impact study.

The announcement regarding the planned activities was published on the web-page of the inspectorate on 22nd March 2013, and was disclosed in the involved municipalities' offices.

Mórahalom bypass section already has the environmental permit. But its presentation is part of the EVD, since it was possible to learn the environmental impacts of the changes caused by the new track and pavement reinforcement. It was proved that the renewal of the main road has no additional or different harmful environmental impact on the section with environmental permit which should have been taken into account during the previous design, licensing course.

The pavement reinforcement of main road no. 55 affects 2 Natura 2000 sites (South Sand Ridge HUKN20008, Szeged Soslík Grass HUNK20012). Natura 2000 Impact Assessment Document was prepared parallel to the Preliminary Assessment Document based on Annex 14 of Governmental Decree no. 275/2004. (8 October).

Construction permits and communication to the public

In case of all sub-sections the building permits are already available. The 7 sub-sections cover the whole design section. During the procedures to obtain building permits the Environmental, Nature protection and Water Inspectorate of Lower-Tisza was involved as relevant special authority regarding environmental protection questions. (6721 Szeged, Felső-Tisza part 1.)

The National Transport Authority has held site visits, public hearings during all building permitting procedures in order to give information to public. A legtöbb esetben az engedély kiadását akadályozó észrevétel nem hangzott el. A tervezett kerékpárút építéshez az érintett szakhatóságok, út-és közmű-üzemeltetők megadták hozzájárulásukat.

During the site visit the following observations arose from the following sections:

10 March 2005 at the administrative hearing, during the construction permitting procedure of main road no. 55 Mórahalom bypass section (National Transport Authority, no. DA/KA/NS/ 1009/0/2009.), the representative of the Kiskunság National Park Board of Directors indicated that it does not agree with the planned track, it will not give his consent to it. The ATIKTVF as competent authority did not give its consent due to the official position of the National Park. To resolve the problem encountered the Investor asked for a stay of proceedings in his letter of 22 June 2005.

Following the consultations, the original plan was partially revised in October 2006. Ecological corridors and 1 bridge have been added to the plan. April 2007, after the declarations replacement of the utility operator, the administrations concerned have been called at the same time as the new plan with the ecological corridors and the bridge have been attached.

While waiting for the arrival of the resolution of the competent authority with respect to the new plans, the resolution of competent authority for the original plan released - mainly issued in 2005 – had been expired. So, it was necessary to call the competent authority in July 2008.

Accordingly, the competent authorities, the road and utility operators have given their consent to the planned road construction.

Based on the pavement reinforcement construction permit of main road no. 55 section between 65+686 -71+829 km (no. DA/KA/354/3/2010) the National Transport Authority reviewed the site on 19 June 2009. At the site visit the representative of MZ..N-Center Kft. has requested to provide adequate access (corresponding to the original conditions) to the petrol station at the segment 66+277 km.

The Investor taking into account the comment of MZ..N-Center Kft has modified the application between the segment 66+277 km and 66+383 km. September 2009 the new plan submitted to the authority contained two reduced-parameter nodes within 650 meters along the main road in the outskirts. The planned establishment does not comply with the technical regulation. 13 November 2009 the Department of Transportation Infrastructure of Ministry of Transport, Communications and Energy has granted the exemptions from Roads Technical Specification in its resolution no. KHEM/1044/2/2009.

The participants of the site visit, the affected stakeholders did not raise objections against the permit issuance. The competent authorities, the road and utility operators have given their consent to the planned road construction.

Based on the cycleway construction permit between 65+579 -71+829 km (no. DA/KA/441/1/2010) the National Transport Authority reviewed the site on 19 June 2009. At the site visit the representative of MZ..N-Center Kft. has requested the change of the cycleway track in order to ensure the planned development of the petrol station in the vicinity of segment 0+700 km. September 2009 a modified new plan was submitted. At the site visit the representative of Pápa Kft has requested to provide adequate access to the pig farm in the vicinity of segment 5+885 km of the cycleway. The National Transport Authority required it in the building permit. The competent authorities, the road and utility operators have given their consent to the planned cycleway construction.

The present environmental summary of the grant application does not contain the 11,5 t pavement reinforcement of main road no. 53 section between main road no. 55 and national border (74+836-87+877 km).

Description of the Project

Category of the discussed road: secondary main road, K.IV.A

Planned speed

 outskirts: 90 km/h

 downtown: 50 km/h

Crown width 12,0 m

Relevant sections of pavement reinforcement (115 kN):

- section of main road no. 55. in Csongrád County, section between Szeged – County border (segments 4+475 - 40+975 km.)
- Mórahalom bypass section (segments 18+202-25+275 km)
- section of main road no. 55. in Bács-Kiskun County, section between County border - Tataháza (segments 40+975-71+869 km.)
- section of main road no. 55. in Bács-Kiskun County, section between, Tataháza – Baja bypass (segments 71+869–98+480 km)

Construction of the planned cycleway parallel to main road no. 55:

- between segments 4+475 – 8+836 km
- between segments 28+257-40+975 km
- between segments 40+975 – 50+610 km
- between segments 50+735 – 63+545 km
- between segments 65+570 - 71+776 km
- between segments 72+890 – 81+090 km
- between segments 82+510 – 84+475 km
- between segments 85+620 – 97+800 km

Current Status

The planned section between segments 4+475 - 98+480km of main road no. 55 is located in Csongrád County and Bács-Kiskun County and is 94+005 km long.

The planned section of main road no. 55 covers the administrative area of the following towns: Baja, Csávoly, Felsőszentiván, Kelebia, Mátételke, Tataháza, Mélykút, Kiszállás, Öttömös, Ásotthalom, Mórahalom, Domaszék, Szeged.

The following soil types can be found on the examined area:

brown mud - mud sand fill, yellow - brown mud, muddy sand meal, humus sandy soil, meadow soil, solonchic meadow soil, detritic mud silt, lean clay.

In terms of the affectedness of the **surface waters** several watercourses, channels, ditches are located on the planning area. In addition, lakes can be found near the track too (Salt Lake Nagyszék in Mórahalom, Lake Madarász, Maty-stream reservoir).

The **flora and fauna, landscape** and ecological characteristics of the examined area are basically determined by the fact that the track of the current main road 55 has long been transformed by human, and it affects an intensively used area. As a result, the rate of the habitats of nature conservation interest is almost negligible, the valuable habitats are predominantly small and are degraded to varying degrees and are isolated from each other.

Valuable natural habitats affected by the track are:

- Sport Airport of Szeged (Szeged Soslík Grass Natura 2000 site)
- Mórahalom, Salt Lake Szék (Széksóstó) - locally valuable vegetation patches
- Ásotthalom, Emlékerdő, Natura 2000 site
- Öttömös, Baromjárás, Natura 2000 site

- Kelebia, main road no. 55 Kelebia junction - open perennial sand grassland remnant patches
- Felsőszentiván, Bokodi-Kígyósi channel fishing pond - potential amphibian habitat
- Felsőszentiván, Szekeres- channel

At the planning phase of the track can be said that it has an impact on the territory of several settlements, thus, it has an impact on the **built environment**.

In terms of **air quality protection**, based on the data of the automatic measuring station at Szeged, Kossuth Lajos sugárút and Rózsa utca, in the heating season of 2011-2012 the value of PM₁₀ was 38 times of 182 measured days exceeding the limit value. This is 20,88 % of the measured days. NO_x was 2 times of 182 measured days exceeding the limit value (1,1%). In the non-heating season of 2011 the value of PM₁₀ was 8 times of 169 measured days exceeding the limit value. This is 4,73% of the measured days. Based on the data of the manual measuring station at Szeged, Kálvária sugárúton, in the heating season of 2010-2011 the value of NO₂ was 1 time of 183 measured days exceeding the limit value. This is 0,55 %-% of the measured days. In the non-heating season was not exceeding the limit value. Based on the data of the manual measuring station at Baja, Széchenyi utca, the value of NO₂ was not exceeding the limit value not in the heating season 2010-2011, nor in the heating season of 2011.

In terms of **noise protection** can be said that current noise load at most of the area in the vicinity of the pavement enforcement of main road no. 55 is determined by the existing main road traffic. Comparing the current noise load values obtained by noise measurements with the limit values of 27/2008 (3 December) Common Regulation of KvVM (Ministry of Environment and Water) and EüM (Ministry of Health), we can draw the conclusion that the daytime noise load does not exceed the limit values prescribed for new planning areas in the vicinity of the examined residential building (Mórahalom, Szegedi út 68) along main road no. 55. While, at night-time the noise load does exceed prescribed values by 1,8 dB.

The visual inspection of the site review shows, there is no significant amount of industrial, municipal or agricultural **waste** in the examined area.

Impacts during construction

The negative effects of the construction phase means the road construction, the scale excavation works and use of borrow pits.

For the construction of MÓRAHALOM bypass a relatively narrow strip of land will be used, therefore, significant *reduction* of *arable land* is not to be expected. The area has no significant effect on area usage, because the area usage of the road is resulting the loss of soils of less soil value number. 54.8% (3900 m) of the 7,000 m long section of the bypass passes through arable land. The surface soil can be removed along the track, the ditches and engineer structures.

The pavement reinforcement should not cause detectable, significant changes in the **subsurface water** level.

During the construction (machinery, transport roads, borrow pits) protected and/or Natura 2000 flora species populations are not at risk. The execution works of pavement – reinforcement of main road no. 55 cause associated noise and human presence. However, this is negligible factor along the track areas. Because no living community (e.g. significant bird habitats, colonial breeding sites, feeding intermittently) highly sensitive for such disturbances is known along the track.

The execution work of the parallel cycleway along the main road no. 55 causes a relatively minor disturbance. Natura 2000 sites are not affected by the planned cycleway construction. But the cycleway runs on the edge of a habitat of significant natural value (Mórahalom Széksóstó, Felsőszentiván, Szekeres-channel). Habitats of nature conservation point of view significant habitats and protected species are not at risk.

Sport Airport of Szeged (Szeged Souselik Grass Natura 2000 site) is located in wider surrounding of the track, 25-30 meter away. Based on the experience possessed on the field it is certain that the proposed investment will not have any additional effect different from the present.

Ásotthalom, Emlékerdő, Natura 2000 site: its main conservation value is the permanent pink stock. It is located in the immediate vicinity of the track, but the proposed work is feasible without disturbing the area, so the damage can be minimized or completely eliminated.

Öttömös, Baromjárás, Natura 2000 site: the proposed project area is potentially affecting the less valuable parts of the area, but with good organization any damages can entirely be eliminated.

In terms of **landscape protection** the borrow pits and storage places during construction appear as a negative visual elements in the landscape. So, their re-cultivation is necessary when the construction is completed between the segments 40+975-50+610 km, 74+836-87-877 km, 71+869-84+669 km. In addition, the re-cultivation of the demolished parking lots and driveways between the segments he 74+836-87-877 km is required.

From **air quality** aspects, the air emission load (especially nitrogen oxides, carbon deposit and airborne dust) caused by the road transport of construction material and machinery operation may be concentrated in place and time. Therefore, it can cause problems in the direct neighbourhood of the construction. The air pollution of the road construction is temporary and affects sections for relatively short time in all cases. Overall, the impact of road construction is a little bit loaded, along the section it is loading. Because the road construction is far away from residential area and its impacts are primarily affecting the surrounding agricultural areas. During the construction there are inevitable environmental impacts to some extent, their scale can be reduced with the compliance of the above standards. In residential areas pollution exceeding the limit values is not expected.

The **noise load** resulting from the transportation is expected to be negligible, since the perceived noise load increase is expected to be under the detection threshold. Therefore, the increase is not significantly affecting the current noise load of the building along the road. During the construction along the affected pavement reinforcing road sections within the settlements, where the track is very close to residential areas, there a separate measures (adequate schedules) shall be applied to decrease the noise caused by the construction so that the construction works do not cause over the limit noise loads. The construction noise is considered tolerable with appropriate noise protection measures.

Most significant **waste** resulting from the pavement reinforcement and in the development of related areas is the amount of the demolition of old pavement and the pitting of the asphalt. Most of the resulting waste is not hazardous waste. Their collecting, transporting – to the recipient, for land filling, or to municipal landfill (dump) - must be performed with the contamination prevention of the environment (e.g. dusting).

Impacts during operation

In terms of **land and water conservation**, the drainage method during operation and its effectiveness is determining, in compliance with the environmental requirements the proposed road rehabilitation will not cause an appreciable change. Given that for the construction of MÓRAHALOM bypass a relatively narrow strip of land will be used, therefore, significant *reduction of arable land* is not to be expected.

In terms of **air quality protection** along most of the track the pavement reinforcement and reconstruction are favourable due to the expected favourable change in air pollution. The establishment has not a significant impact on air protection.

In terms of **flora and fauna protection** after the implementation of the project, after the pavement reinforcement of main road no. 55 and 53 and during the operation are no harmful impacts expected different from the present nature and scale. Main road no. 55 and 53 are currently operating as busy main traffic routes.

Since this is a widening of an existing road the most striking change in the **landscape** is that roadside vegetation partially disappears, the roadway becomes wider and installation of plants in the poor sections of roadside plants. During the planning a planting plan was prepared, which provides the replacement of cut trees and the matching of the track into the landscape.

In terms of **noise protection** along most of the track the pavement reinforcement and reconstruction are favourable due to the expected favourable change in noise load. The establishment has not a significant impact on noise protection.

In case of Mórahalom bypass the long-term noise levels will exceed the applicable limit values in several places during the night. Therefore, protective measures may be justified in areas affected by exceedance. The establishment of noise reduction noise barrier is required for the long term "with" condition. According to the calculations the proposed bypass is feasible with the noise barrier. The limit values set by the law are met.

With minimization, proper collection, disposal of the waste generated during the operation the **waste management** can be solved well.

The proposed road rehabilitation has no significant impact on the urban **and built environment**. The proposed road rehabilitation is beneficial to the regional transportation, society and economy.

Based on the above, in terms of environmental protection the pavement reinforcement of main road no. 55 is not permissible with the prescribed environmental measures and provisions and it has a beneficial social, economic impact.

Impact reducing measures

Geological medium, subsurface water

There is no need for separate soil conservation measures, the soil conservation and humus management requirements must be met.

Surface waters

During construction

Cleaning of motor vehicles can be performed only in for the purpose suitable wash places. The quality of rainwater lead into receptive must meet all times the provisions of Government Decree 220/2004 (21 July) and Regulation 28/2004 (XII.25) of KvVM (Ministry of Environment and Water). In case of Mórahalom bypass scaled oil and sludge pit water quality protection cleaning engineer structures will be built prior to stormwater discharges into the receiving periodic watercourse in inland water channels.

Air quality protection

During construction

Trucks carrying the material must be covered in order to reduce dust pollution. The roads used for transportation and the deposited soil material (until reuse) must be watered at regular intervals in order to prevent dusting.

During operation

In terms of **air quality protection** along the section affected by the pavement reinforcement and reconstruction of main road no. 55 no residential building, recreational building, educational, schooling, health, social and administrative buildings should not be located within 25 metres from the axle of the road. Along Mórahalom bypass section not any of the listed buildings above can be placed.

Noise protection

The operation of the examined pavement reinforcement does not require noise measures (active or passive).

In case of Mórahalom bypass the long-term noise levels will exceed the applicable limit values in several places during the night. Therefore, protective measures may be justified in areas affected by exceedance.

The proposed location of noise barriers is presented in details in the following table:

Track sign	side	facility to be protected	segment km		L (m)	h (m)	A (m ²)
			from	until			
Mórahalom bypass	left	Mórahalom, topographical lot number: 0406/151	18+900	19+100	200	2	400
	left	Mórahalom, topographical lot number:0254/11	20+250	20+450	200	2	400
	left	Mórahalom, topographical lot number: 0270/24	21+930	22+130	200	2	400
	Total:						1800

Noise barriers located directly along Mórahalom bypass section shall be at one side of absorbing type.

Habitats, flora and fauna protection

During the pavement reinforcement, any land use, transportation and other activities, that can result the creation of open soil surface is prohibited on Natura 2000 site.

The landfill sites should be selected on a way that they do not damage either directly or indirectly the landscape and natural values, and they do not change the natural flow regime in the region.

Protection measures on Mórahalom bypass section

In order to reduce the impacts on the wildlife the following conservation solutions are needed:

Ecological passage construction

- between segment 21+100-21+300 km
- between segment 21+500-21+800 km
- between segment 22+000-22+100 km
- between segment 22+828 (22+824) km at Külső-csorvai channel crossing
- between segment 23+808 (23+415) km at Salt Lake Szék main channel crossing

The ecological passages must have an interspaces of 20 m, a ceiling height of min. 2m. On the ground level beneath the bridge the original vegetation or repatriation should be preserved.

Beyond the construction of ecological passages we propose to transfer of the Vágó-channel with the bridge under the road.

Frog passage construction

- between segment 18+200-18+600 km - 1
- between segment 19+700-20+500 km - 1
- between segment 23+400-23+700 km - 1
- between segment 23+800-24+000 km - 1

Passageways should be provided in those sections of grassland where the high water level of spring does not flood them. Along the width of grassland, on both sides of the road the establishment of a flapper is required as well.

If along the water level areas of the road infiltration ditch will be built, in the spring season it is expected to be a breeding place for frogs as well.

Therefore, in these road sections it is recommended to set up a flapper between the ditch and the road.

Alley plantation

- between segment 19+500-20+500 km at the right side of the road
- between segment 19+700-21+000 km at the left side of the road

Installing an alley near the road can reduce the disturbance of the fauna in grasslands (light, noise). The alley should be planted of domestic species (white poplar, common ash, English oak), and of the development of appropriate bordering bushes (Tatar maple, meadow maple, meadow elm, privet, spindle-tree, blackthorn).

Relocation of protected animals

The relocation of the following animals affected was proposed:

- In the vicinity of the segments between 18+200-18+600 km is the white stork nest. The track does not affect the breeding place, it passes adjacent to it. For the successful breeding it is proposed to establish a second breeding place (on a pole mounted bracket nest) in the north edge of the grassland.
- In the vicinity of the segments between 18+200-18+600 km a couple of roller breed in the elderly white poplar tree behind the farm. The track does not affect this breeding area but during the construction period due to increased human presence the breeding/place reservation may fail. Taking this into account they suggest to place the breeding hole type 23 C.

The current track construction can only be achieved with the strict **conditions of KNPI**, listed below:

- Relocation of protected animals detailed above - the newly created habitat - solves the contractor (investor).

- Habitat should be established. Their water supply has to be similar to the lost habitats water supply. Because the quality of a similar habitat can only be created this way.
- In the vicinity of the segments between 22+700-22+900km, 23+400-23+700km and 24+400-24+600 km is due to the road construction isolated. The replacement of the grassland south of the road requires a similar spatial extent, new semi-natural habitats creation (as previously discussed).
- Landscaping is necessary to create the new habitats at a desirable altitude above the sea level (in each case landscaping seems to be necessary - see above). Additionally, it is may be necessary to ensure the water preservation and water resources of the wetlands. In these cases, a concept must be elaborated to replace the calculated additional evaporative loss.
- The previously detailed protective solutions must be implemented (ecological passages, frog passages, protective alleys). The location of the engineer structured must be discussed with the experts of KNPI.