

Data Sheet for Asking the Opinion of the European Commission on the Modification of the Development Plan of Győr Town of County Rank Required by the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Article 6 (4).2)

Member State: **Hungary**

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Documentation sent for: **asking for opinion [Article 6., Section (4), Sub-Section 2.]**

Competent National Authority: **North-Transdanubian Inspectorate for Environment- and Nature Protection and Water Conservancy (Észak- dunántúli Környezetvédelmi, Természetvédelem és Vízügyi Felügyelőség)**

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1. Plan or project

Name and code of the Natura 2000 area, to which the project is being prepared, and the investment is planned, or to which the plan or project is expected to affect:

'Gönyői-homokvidék' HUFH20009

Category of the area:

☐ Special Protection Area for Birds, based on Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds (hereafter: Birds Directive)

☒ Special Area of Conservation, based on Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (hereafter: Habitats Directive)

☒ hosting priority habitat type (s) / priority species (s)

The data sheet was prepared using the documentations made by the Cooperative Research Centre Ltd. of the West Hungarian University and the National Park Fertő-Hanság Directorate (produced under the number 11/2010-4 in August 2010): „Natura 2000 appropriate assessment documentation of the development plan amendment and planned investment (Győr)”.

Summary of the plan or project having an effect on the site:

1. a) Introduction of the plan or project, defining its aim

The present documentation relates to the modification of the development plan of the city of Győr, concerning the present economic areas, the district of Győrszentiván and the area bordered by road M19.

The focal point and purpose of this plan is the re-zoning of the economic-industrial area, located in the middle of the planning area.

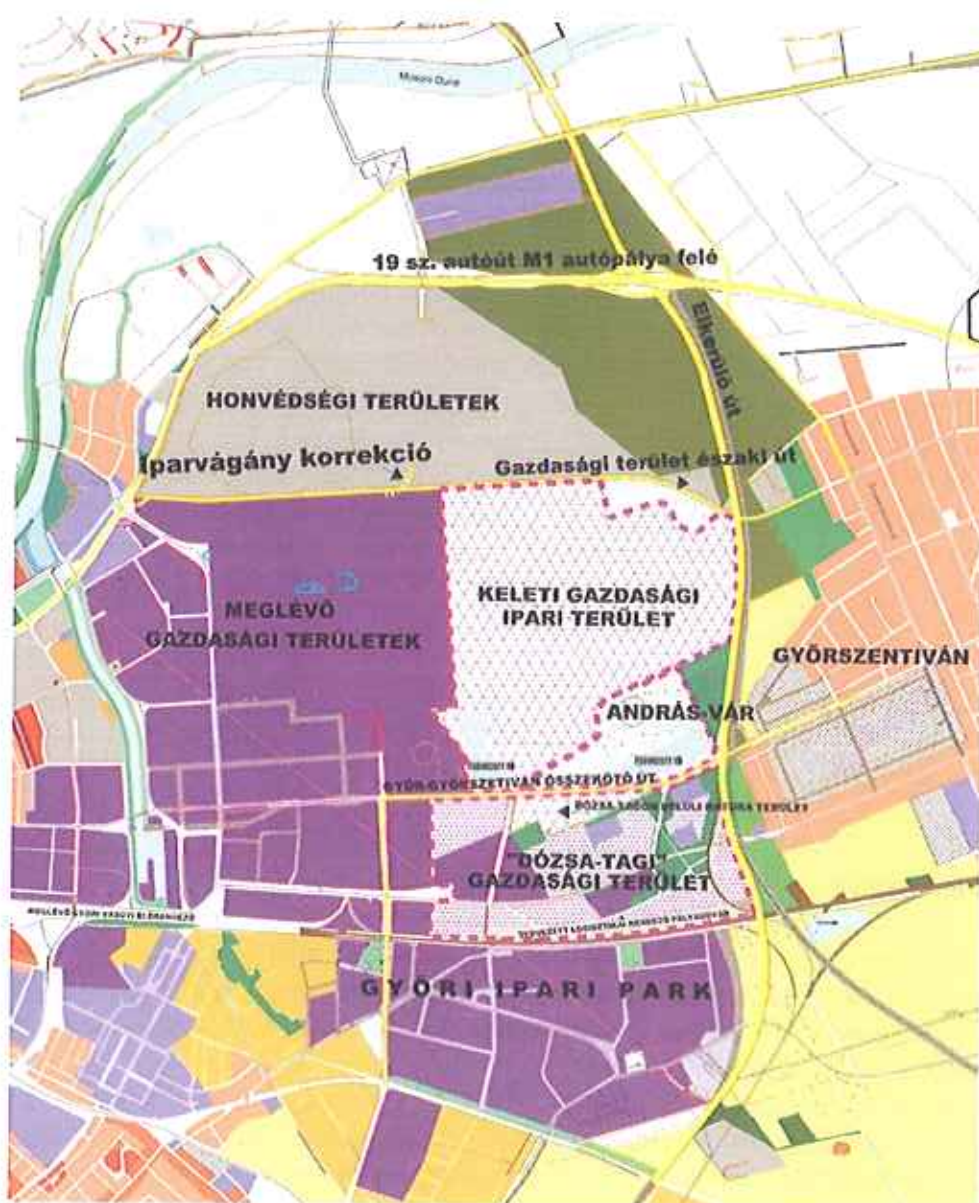
While the new development plan is being outlined, the potential investor is in the progress of planning an investment project. The level of elaboration of the investment plan significantly exceeds the requirements of the development plan. As a result, the investment project plan is suitable for a Natura 2000 impact assessment on its own.

The development plan also contains elements that are only partly connected to the investment project. However, these elements and the relevant impacts of the investment project can be added up, due to the overlaps in the areas of impact.

The planned developments will be discussed in connection with 4 geographical units:

1. The Eastern economic-industrial area
2. The Eastern bypass and the connecting road network
3. 'Dózsa- tagi' economic area
4. Other developments: Area of Andrásvár and industrial railway track correction

General overview map



Legend:

- „19. sz. autótűt M1 autópálya felé”: Road nr. 19 towards motorway M1
- „Honvédségi területek”: Plots owned by the Hungarian Army
- „Iparvágány korrekció”: Modification of military railway lines
- „Elkerülő út”: Bypass road
- „Gazdasági terület északi út”: Northern road bordering the economic area
- „Meglévő gazdasági területek”: Existing economic areas
- „Keleti ipari- gazdasági terület”: Eastern economic-industrial area
- „Győr-Györszentiván összekötő út”: Road connecting Győr and the district of Györszentiván
- „Tervezett tó”: Planned lake
- „Dózsa-tagon belül Natura terület”: Natura 2000 area inside the Dózsa-district economic area
- „Tervezett logisztikai rendező pályaudvar”: Planned rail transfer station
- „Meglévő győri vasúti előrendező”: Existing rail transfer station in Győr
- „Dózsa-tagi gazdasági terület”: Dózsa-district economic area
- „Győri Ipari Park”: Győr Industrial Park

The Eastern economic-industrial area

The investor is planning to complete an investment project of _____ Euros between 2010 and 2018. The investment will create _____ new jobs in the machinery and automotive industry. The _____ workers will be directly employed by the investor. Besides the various automotive component manufacturing and car assembly units, 4 other technological units are also planned: an auto body construction unit, a paint shop, an assembly shop and a supplier park. In addition to the units directly related to production, further technological units will also be established. These units will supply the needs of cooling, compressed air and heat related to the production.

In the auto body construction unit, various fitting and bonding (welding, polishing, riveting, gluing) technologies will be applied. A drying machine will also be installed to firm bonds. The assembled auto bodies will be cleaned in the paint shop. The process consists of pre-treatment, immersive lacquering and chassis protection. As a further step, the several layers of lacquer, including filling, base and cover lacquer will be applied. The application of lacquer is followed by the drying of layers in various phases. In the assembly shop, the auto body and the parts will be assembled by conveyor-belt technology. The supplier park hosts the suppliers of major parts and the related service providers (maintenance, cleaning, machine installation, electrical experts etc.). All in all, the production will apply the Best Available Technology, causing minimal burden to the environment.

Production will be ramped up in two stages between 2013 and 2018. In the first phase, a capacity of 500 vehicles per day will be achieved, which will further be increased to 1,000 vehicles per day in the second phase.

The Eastern bypass and the connecting road network

The above discussed project will bring about a significant increase in traffic. Based on the present situation, the traffic would go through inhabited areas. The planned Eastern bypass will provide a connection between main road 1, and the motorways M19 and M1 with the goal to ease the traffic of the city centre.

The currently effective development plan of the city already includes a route plan for the bypass. The route and the connecting road network will be revised in the modified development plan in the interest of the planned economic areas and the feasible traffic order.

The Northern segment of the connecting road network serves the transportation of the labour force from Győr to the economic area. The Southern segment of the road network is also used for the transportation of labour force but carries heavy traffic and provides connection between the centre of Győr and the district of Györszentiván, too.

'Dózsa-tagi' economic area

The plan has the objective to make economic activity possible by assigning the area. The city of Győr has long-term plans to establish a rail transfer station and a Park & Ride lot, but the fact remains that the Győr Industrial Park is utilized to almost full potential even by now. The area currently consists of 92 allotments. They are mainly utilised by industrial plants and agricultural farmers. The majority of the area is assigned to economic activity in the currently effective development plan of the city. The planned investment project on the Eastern

economic-industrial area justifies the long-term plans, especially the establishment of a rail transfer station in medium term.

Other developments

The area of 'Andrásvár' is an archaeological site under high protection. On and around the site, there are historical relics of various ages to be found. The relics are exposed to damage due to agricultural cultivation; the re-zoning aims to stop the harmful process and establish structured green plots and a rainwater drainage system.

There is currently a military railway track passing through the Eastern economic-industrial area. The plan envisages that a 2-kilometre-long section of the line in the Eastern economic-industrial area will be dismantled. Railway connection for military purposes will be secured by a 150-metre-long line modification.

1. b) Volume, importance and duration of the plan or project

The Eastern economic-industrial area

The investor plans to utilise the whole Eastern economic-industrial area for the project. The plot will be developed on HU/20009 sand lands of Gönyü - 'Gönyüi-homokvidék' (hereinafter referred to as 'Gönyüi-homokvidék') which is a special nature conservatory area (SAC).

Volume of the financial investment:

The total volume of the investment project during the full project period (2011-2018) is
Euros.

The number of workplaces created by the investment project:

The current project plan envisages the direct creation of a minimum of new workplaces during the full project period (year 2018 inclusive). Upon the launch of production in 2013, people will be employed, followed by a gradual increase in the further stage. It is important to mention that 10 % of the jobs created by the project will require highly qualified or specially trained employees.

The investor calculates that on top of the directly created workplaces, further workplaces will be created in the supplier park until 2018.

Moreover, the planned project will generate further developments and workplaces in the given and the neighbouring regions among suppliers and service providers. At conservative estimates, the Hungarian Government expects that on top of the newly created workplaces generated directly by the investor and in the supplier park, the project has the potential to create another workplaces indirectly. It should be noted that the Hungarian Government applies a really conservative estimate as, for example the results of the ACEA survey¹ suggest that even workplaces can be created indirectly in the region of Győr and in the surrounding greater region, including Austrian and Slovakian regions.

¹ http://www.acea.be/index.php/news/news_detail/economic_turmoil_hits_vehicle_makers_hard/

In conclusion, the project will create at the most conservative estimate a minimum of new workplaces partially due to its so-called multiplier effect. The workplace generation of this magnitude plays a major role in preventing the labour force from leaving the region, and the applied manufacturing and logistical technologies can positively contribute to the training of high quality labour force in large quantities.

Physical magnitude of the investment project:

The whole project portfolio requires a -hectare (sq m) area in one piece with appropriate technical and logistical conditions. To keep the areal requirements low, the project is planned so as to utilize the area as effectively as possible in compliance with the legal regulations.

It means that, respecting the conditions of the area, a maximum of ca. sq m area can be covered by buildings, roads and parking lots. The whole project portfolio requires approximately sq m of covered area, including the requirements of the 4 main manufacturing processes (pressing, auto body construction, painting, assembly) and the supplier park in the magnitude of sq m, as well as the further covered areas of approximately sq m used for ancillary buildings, roads, parking lots, logistical areas.

Importance of the investment project:

The planned project is of the highest public interest for the region of Győr and for the neighbouring Austrian and Slovakian regions, as well. Based on the above mentioned data, the project could considerably contribute to the economic upsurge of the regions with tight economic relations.

The project is especially important for Hungary, as its positive effects would come forward in almost every area of life. The most important impacts would affect the following areas (further details in chapter 1. f):

- increase in the rate of employment
- improvement of higher education and vocational training due to R&D activities, development of the curriculum and the increase in the number of people in education and training.
- financial and macroeconomic impacts: supporting the compliance with the obligations of the EU and the IMF, supporting the accomplishment of the EU 2020 programme,
- positive effects on the foreign trade balance, balance of payments and the exchange rate of the Hungarian Forint
- indirect economic-financial effects: effects on foreign direct investments, gain in credibility in the money market
- acceleration of the catch-up of the West-Transdanubian EU region to the EU-27 average

The impact on the national economy is clearly shown by the fact that the project itself would contribute to Hungarian GDP by 1.8%.

The implementation of the investment project is expected to have a significant multiplier effect for foreign direct investments. It would enable Central and Eastern Europe, including Hungary to improve its acknowledgement and reputation as a strategic investment location in the global investment competition.

Besides the purely economic arguments, it must also be emphasized that the investor will apply the Best Available Technology to produce automotive and machinery products, which could also significantly improve the industrial prestige of Hungary.

The positive impact on the vocation training goes beyond the direct economic impacts and contributes to sustainable development.

The planned period of the investment project:

Legal conditions of the project implementation must be granted by Q1 2011. Buildings will be constructed between 2011 and 2013. Due to its significant magnitude, construction requires 2 years. The first phase of production will be launched in 2013.

The whole period of the project lasts from 2011 to 2018.

The planned starting time of Q1 2011 is explained by the industrial features of the investor and the criteria of the applied technology. The Republic of Hungary will support the authority procedures directly related to the project provided the Commission gives a positive opinion to the present request. As a result, the actual starting time of the project is subject to the opinion of the Commission and the date of receipt of the opinion.

The Eastern bypass and the connecting road network

The development plan describes the bypass running from North to South as a dual carriage way of 40-metre-width. Existing and planned economic areas would be connected to the bypass by 2 roads of East-West direction each with 2 by 1 lanes.

The planned developments are expected to carry the heavy and passenger traffic related to the investment and to ease the traffic pollution of the already inhabited areas.

The roads are planned to cross the very important nature conservation areas of 'Gönyű-homokvidék' in the length of 3.2 kilometres. The project is planned to be implemented in 2014-2015.

'Dózsa-tagi' economic area

The area of a total 133 hectares is located between the southern segment of the planned road network and the main railway line Nr. 1. The currently effective development plan classifies 70% of its total area as economic even today. The planned re-zoning envisages that a roughly 11-hectare large area of the south-western part of the very important nature conservation area of the sand land of Gönyű will be attached to this zoning unit.

Given the fact that the Industrial Park of Győr is close to full, the area could be utilized by the enterprises settling in the neighbourhood of the investment in the 'Eastern economic-industrial area'. There is also a call for the establishment of a rail transfer station in the area. The station is expected to have a double function: on the one hand, it will provide additional back-up support to the already existing rail transfer station of Győr in special transfer tasks and will also serve as railway connection to the Győr Industrial Park located south of the area. As a result, the heavy traffic generated by the Industrial Park can also be eased.

In conclusion, the modification of the development plan pertaining to the given area is expected to support logistical tasks related to the investment project and provide space for the enterprises settling nearby.

For the long-term utilization of the area, the City of Győr also plans to establish a Park & Ride lot with the aim to ease the passenger traffic of the city centre. The partial utilization of the Dózsa-tagi economic area will start in 2015 and will reach full speed by 2030.

Other developments

The area of 'Andrásvár' is an archaeological site under high protection. On and around the site, there are historical relics of various ages to be found. The relics are exposed to damage due to agricultural cultivation; the re-zoning aims to stop the harmful process and establish structured green plots and a rainwater drainage system.

There is currently a military railway track passing through the Eastern economic-industrial area. The plan envisages that a 2-kilometre-long section of the line in the Eastern economic-industrial area will be dismantled. Railway connection for military purposes will be secured by a 150-metre-long line modification. The modification should be executed in course of year 2012, not later than 31st December.

1. c) The extent of the area that is required by the project, the description of the magnitude of the effects on other areas, their visualization on the map

The site and environment of the planned project can be seen on map annex number 2.

The Eastern economic-industrial area

The development plan describes the size of the site as hectares. The planned investment project requires approximately sq m of covered area, including the requirements of the 4 main manufacturing processes (pressing, auto body construction, painting, assembly) and the supplier park in the magnitude of sq m, as well as the further covered areas of approximately sq m used for ancillary buildings, roads, parking lots, logistical areas.

The enlargement area of hectares



The directly impacted area regarding this project is pollution, indirect impacts go beyond the

Due to the noise and dust

In addition, the following areas should also be considered as indirect areas of effect: the area where effects might be caused by the Eastern bypass and the connecting road network (in proportion to the traffic), and the area where effects are caused by the modification of the industrial railway line (as its construction serves to replace the railroad connection that will be dismantled due to the planned project).

The Eastern bypass and the connecting road network

Regarding the Eastern bypass and the connecting road network (the north-south bypass around the site) the following territories can be considered as areas of effect. Direct areas of effect are the roads and the related establishments (shoulder of the road, ditch, closed fields) and the areas (34.1 ha) that are expected to be damaged by the construction works. However, the indirect area of effect includes the whole of the training field of Györszentiván (631 ha) due to the disintegration of the area and the permanent disturbance.

Main technical parameters of the planned roads are as follows:

The Eastern bypass:

- Planned width of 40.0 metres as in the currently effective development plan
- 2 by 2 traffic lanes
- Width of 3.75 metres per lane
- Width may vary in junctions depending on geometry and traffic objects.

Northern segment of the connecting road network:

- Suggested width of 20-22 metres
- 2 by 1 traffic lanes
- Lane width of 3.5 metres

Southern segment of the connecting road network:

- Planned width of 30.0 metres as in the currently effective development plan
- 2 by 1 traffic lanes
- Lane width of 3.5 metres

'Dózsa-tagi' economic area

The northern side is bordered by the southern segment of the planned road network. Accordingly, the potential area of direct effect is the land fragmented by the southern segment of the connecting road network from the Natura 2000 area. This is about 11 ha in size.

The indirect effects on the Dózsa-tagi area are the effects of the traffic going in and out of the area, equalling to a proportionate part of the total traffic on the southern segment of the Eastern bypass and the connecting road network.

Other developments

In the area of Andrásvár a maximum of 8-hectare large land would be affected by the regulation of the trench network crossing the area and the establishment of the planned retarding reservoir with a water surface of 4-7 hectares (the exact size of the reservoir would be determined by the detailed planning).

The planned new section of the modified military railway line requires less than half a hectare, however, the area affected in the construction phase may go up to 1 hectare.

1. d) Introduction of the establishment required by the realization of the plan or project

The Eastern economic-industrial area

Site buildings in the period of construction are as follows: container offices, container conference rooms, container dressing / shower rooms, canteen.

Access to the site buildings is provided by temporary roads (covered with a single layer of asphalt). Temporary sewage, water and electricity supplies can be provided by the existing networks.

Enclosed storage places will be covered with dustless broken stone.

The Eastern bypass and the connecting road network

Establishments and objects related to road construction works, rainwater drainage, water supply, and sewage will be implemented in accordance with the schedule.

In the first phase, the southern and northern segments of the connecting road network will be constructed providing connection to the inner road network of Györszentiván followed by the construction of the connecting segments of the bypass. In the first phase, same-level junctions will be established, later replaced by more level junctions upon completion of the bypass (expected around 2013-2018).

Dózsa-tagi economic area

The construction of the road network as described in the development plan will depend on the progress of development in the economic area based on the demands of investors. Further to the plan, the development of the rail transfer station is expected to start in 2015. All developments are expected to be completed until 2030.

Other developments

The planned construction works in the area of Andrásvár are minor in volume. The planned establishments include a water surface in the range of 4-7 hectares and a lock that directs the water into the feeding channel. The latter is an object of small size requiring only a few square metres of space; it can be manufactured according to standard designs and assembled on site. The establishment of the military railway line modification is the line itself. The practice of diesel-haulage does not call for the installation of electric lines. Due to the low rate

of traffic, only one crossing (with traffic lights) are to be established at the crossing point of the northern segment of the connecting road network.

1. e) Description of the natural conditions without the impact of the plan or project implementation

The surrounding landscape of the planning area

The flora of the special conservation area 'Gönyői homokvidék' belongs to the faunal zone 'Kisalföld' (Arrabonicum). In accordance with the climatic and soil conditions the natural vegetation of this region was once sand steppe. The patchy steppe oaks (*Populi-Quercetum*) forests were dotted with Pannonic inland sand dune thickets (*Junipero-Populetum*), open sandy grasslands and closed sandy steppes (*Festucetalia valesiacae*). The current steppe grasslands of the forest-steppe area expanded after the human colonization accompanying deforestations.

The special conservation area 'Gönyői-homokvidék' consists of four parts (Annex No.1.); the total area (together with the candidate enlargement area) is 2823 hectare.

In the surrounding area we can find habitats strongly influenced by man. These are mainly agricultural lands, gardens, and settlements. Areas covered by natural or semi-natural vegetation are not representative outside of the Natura 2000 areas.

The westernmost part of the special conservation area 'Gönyői-homokvidék' is the 'Györszentiváni gyakorlótér' (training field) which is now enclosed by Győr and (now administratively part of Győr) Györszentiván. Its area is 718.6 hectare. The 'Györszentiváni gyakorlótér' was operated as a military establishment for decades; the terrain shows the trace of military activity. In certain parts of the area significant amounts of ammunition and other residues of metals can be found in the soil.

The area is enclosed by small-plots and large scale agricultural lands from the south. In the north, on the other side of the road 10 there are still smaller fragmented remains of sand habitats. Further north we can find the Moson-Danube River and swamp meadows, reeds and groves along the river.

Species of community interest in the planning area

The following species of community interest occur in the investment area of HUFH20009 'Gönyői-homokvidék'. The species marked with * are Habitats Directive Annex II species for which the site has been designated, based on the official data sheet (SDF = Standard Data Form) sent to European Commission in 2008. The species marked with ** have recently been proposed for inclusion among the species for which the site is designated, but these proposed changes have not been officially submitted to the Commission yet.

HD Annex	Name
II	<i>Carabus hungaricus</i> *
II	<i>Cerambyx cerdo</i> **
II	<i>Lucanus cervus</i> **
II	<i>Myotis myotis</i>
IV	<i>Nyctalus noctula</i>

IV	<i>Lacerta agilis</i>
IV	<i>Elaphe longissima</i>
IV	<i>Lacerta viridis</i>
IV	<i>Hyla arborea</i>
IV	<i>Pelobates fuscus</i>
IV	<i>Rana dalmatina</i>
IV	<i>Rana esculenta</i>
IV	<i>Bufo viridis</i>
II	<i>Iris humilis</i> ssp. <i>arenaria</i> *

The area affected by the investment have been already adopted as a special area of conservation (SAC), however a part of the site (359 ha) is only designated as INMOD site for priority conservation areas.

Hungarian carabus (*Carabus hungaricus*)

The Hungarian carabus (*Carabus hungaricus*) was first found only in the 'Gönyői-homokvidék' in 2006 during a survey carried out on behalf of the FHNPI (Fertő-Hanság National Park Directorate) (Szinetár 2006). Further studies have been carried out to assess the species distribution in 2008 (Szinetár 2008). The results showed that the species is present in high amounts in all sandy grasslands, regardless of their natural status. The species' population level on the planned eastern economic-industrial area is definitely several thousand.

See also Annex 5. map.

See also Annex 11. map.

Great capricorn beetle (*Cerambyx cerdo*) and the stag beetle (*Lucanus cervus*)

The great capricorn beetle (*Cerambyx cerdo*), listed in Habitats Directive Annex II and the stag beetle occur only in a few places because of their special habitat needs.

There is a known occurrence of these beetles in the investment area, near to the old oak woods in Györszentiván, where we estimated the populations as a few dozen individuals based on carcasses observed in the rotted wood of old trees (*Lucanus cervus*) and on the exit holes on the trunk (*Cerambyx cerdo*).

See also Annex 6. map.

Mouse-eared bat (*Myotis myotis*) and noctule bat (*Nyctalus noctula*)

No current data are available on the mouse-eared bat (*Myotis myotis*), listed in Habitats Directive Annex II and noctule bat (*Nyctalus noctula*), listed in Annex IV. Only a few investigations were made some 15 years ago showing that there were occasional observations in an oak wood next to Györszentiván. Based on the investigation not more than a few individuals are likely to live there.

Sand lizard (*Lacerta agilis*)

The sand lizard (*Lacerta agilis*) is explicitly frequent species, except of closed pine and black locust forest it occurs everywhere in the area. Based on a non-systematic streak sampling (100x5m, 2-11 individuals per sample), the population is estimated for several thousand individuals.

See also Annex 9. map.

Aesculapian snake (*Elaphe longissima*)

The aesculapian snake (*Elaphe longissima*) is known to occur in the area, park rangers regularly report its presence.

We estimate the population size of the species in the expected damaged area – based on the species ecological demands and the area characters – for 10-15 individuals.

See also Annex 9, map.

Green lizard (*Lacerta viridis*)

The greatest lizard of Hungary is the green lizard (*Lacerta viridis*), which also appears in the site. It is not as frequent as the sand lizard, but it can be observed in almost every patch of grassland.

No sampling plots have been previously designated for the species in the 'Györszentiváni gyakorlótér' area, however under the framework of NBmR (National Biodiversity Monitoring System) the species was studied nearby, close to Felpéc where in the designated sampling area of 0.5 hectares in the three samples 2, 8 and 7 individuals could be observed (in 2003). The area is similar, but the area near Felpéc is more forested, the proportion of grassland is much smaller than in the area under consideration now. Furthermore, in the later one the spots covered by high giant goldenrod are not really suitable for the species. The population size of the expected damaged area is approx. 100 specimens, which are estimates based on earlier visits, and the samples from Felpéc.

See also Annex 9, map.

Green tree frog (*Hyla arborea*), Common spadefoot (*Pelobates fuscus*), Agile frog (*Rana dalmatina*), Edible frog (*Rana esculenta*), Green toad (*Bufo viridis*)

From the amphibians of community interest the green tree frog (*Hyla arborea*), the common spadefoot (*Pelobates fuscus*), the agile frog (*Rana dalmatina*), the edible frog (*Rana esculenta*) and the green toad (*Bufo viridis*) are known to occur in the area. The species should be dealt together because of their reproductive habits and needs. Because of the characteristics of this area, a relatively small number of suitable reproduction places can be found in 'Gönyűi homokvidék'. In the area affected by the investment project, in the seasonal water levels developed along roads and railways, however, we found a large number of individuals of each species in spring. The extension of the wetlands, depending on rainfall varies between 1-3 hectares. During the reproductive period the strikingly large tadpoles of common spadefoot (*Pelobates fuscus*) are conspicuous, sometimes even thousand of individuals can also be observed, but a similar magnitude of the other species occurs as well. Because of the concentrated presence of amphibians, the predation is very high, only a few hundred individuals can live the spawning age.

See also Annex 8, map.

Sand iris (*Iris humilis* ssp. *arenaria*)

As an example of the flora of community interest occurring in the area we hold detailed and accurate data about the sand iris (*Iris humilis* ssp. *arenaria*), however they are far from complete yet. The species occurs almost exclusively in open sandy grasslands on the site. The specificity of the species is that even in consecutive years the magnitude of the observed individuals may differ by orders, and because of the polikormon composition the exact number can not be ascertained. In 2005, in the framework of NBmR a number of 10,500 shoots have been assessed in a 1x1km sampling area, while in 2002 only 80. On the total area of the site there are definitely more than 10,000 plants living. On the planned investment area, there is one spot (1.9 ha), where the species is known to occur, the local population here is around ca. 500 individuals.

See also Annex 7. map.
See also Annex 11. map.

The Eastern economic-industrial area

The following species with community importance occur in the investment area (Species marked with * are Habitats Directive Annex II species based on the SDF of year 2008, species marked with ** are recommended marker species in 2009).

HD Annex	Name	Estimated population
II	<i>Carabus hungaricus</i> *	several thousand
II	<i>Cerambyx cerdo</i> **	few individuals
II	<i>Lucanus cervus</i> **	few dozen
II	<i>Myotis myotis</i>	present
IV	<i>Nyctalus noctula</i>	present
IV	<i>Lacerta agilis</i>	several thousand
IV	<i>Elaphe longissima</i>	10-15
IV	<i>Lacerta viridis</i>	~100
IV	<i>Hyla arborea</i>	few hundred
IV	<i>Pelobates fuscus</i>	few hundred
IV	<i>Rana dalmatina</i>	few hundred
IV	<i>Rana esculenta</i>	few hundred
IV	<i>Bufo viridis</i>	few hundred
II	<i>Iris humilis</i> ssp. <i>arenaria</i> *	500

The Eastern bypass and the connecting road network

The following species with community importance occur in the area of the planned eastern bypass and the connecting road network (Species marked with * are designating species based on the 2008's year SDF, species marked with ** are recommended marker species in 2009).

HD Annex	Name	Estimated population
II	<i>Carabus hungaricus</i> *	~100-150
II	<i>Cerambyx cerdo</i> **	~50
II	<i>Lucanus cervus</i> **	~100
II	<i>Myotis myotis</i>	present
IV	<i>Nyctalus noctula</i>	present
IV	<i>Lacerta agilis</i>	~100-500
IV	<i>Elaphe longissima</i>	1-2
IV	<i>Lacerta viridis</i>	10-50

The descriptions are generally valid for all species in connection with the investment here, too. The greater part of the population of the great capricorn beetle (*Cerambyx cerdo*), the stag beetle (*Lucanus cervus*), the mouse eared bat (*Myotis myotis*) and the noctule bat (*Nyctalus noctula*) occurring in the old oak woodlands would be affected by the bypass.

'Dózsa-tagi' economic area

There is a relatively small number of suitable habitats for species of community interest in this proposed commercial area. In the forested area we cannot rule out the appearance of the following species; however the area is basically unsuitable for them. In the western edge of the area (on the sandy grassland), however, the following species may occur:

HD Annex	Name	Estimated population
II	<i>Carabus hungaricus</i> *	~10
IV	<i>Lacerta agilis</i>	~50
IV	<i>Lacerta viridis</i>	~1-2

Other developments

In the 'Andrásvár' area the occurrence of species of community interest is only occasional, in some corners of the area they might occur more frequently (the area is mostly under cultivation or has been abandoned, heavily weeded). It should be mentioned, however, that there are some small, temporary water levels, which serve as amphibian breeding places. The development does not harm this amphibian species, because habitats favourable to the amphibians are proposed in the development. In the case of the proposed industrial railway modification the affected populations are as follows:

Annex	Name	Estimated population
II	<i>Carabus hungaricus</i> *	~20-50
IV	<i>Lacerta agilis</i>	~50
IV	<i>Lacerta viridis</i>	~2-3

Habitats of community interest in the planning area

In the following table the **habitats of community interest** of the HUFH20009 'Gönyűi-homokvidék' are listed, bold are selected habitats which occur in the area of investment and which may be affected by the investment, respectively.

Code	Name	% ²
6260	Pannonic sand steppes*	50
91F0	Mixed oak-elm-ash forests of great rivers (<i>Quercus robur</i> , <i>Ulmus laevis</i> , <i>Ulmus minor</i> , <i>Fraxinus excelsior</i> or <i>Fraxinus angustifolia</i> - <i>Ulmion minoris</i>)	0,1
91N0	Pannonic inland sand dune thicket (<i>Junipero-Populetum albae</i>)	0,6
91M0	Pannonian-Balkan turkey oak –sessile oak forests	0,3
91I0	Euro-Siberian steppe oak woods (<i>Quercus</i> spp.)*	0,5

² Coverage values in the SDF in relation to the entire territory

* Habitats Directive Annex I habitats in the investment area, based on the 2008's year SDF

See also Annex No.3; No.4; No.11 map.

The data reported below are based on surveys conducted particularly in 2001-2003 (Bauer 2003, Weaver et al. 2003), however, the data and the classification of certain habitats were specified, if necessary revised after the latest surveys (2009-2010).

Habitat description of the naturalness are derived from Nemeth-Seregélyes naturalness description, however, it doesn't completely correspond with it (Takács & Molnár 2009).

- D01 – Completely degraded / regeneration at the early stage: Dominated by "weeds" and featureless species only, not any type of natural vegetation can be recognized, i.e. in the categories of close-to-natural and semi-natural we can not find this category.
- D02 – Highly degraded / poorly regenerated stage: species composition featureless, the disturbance-tolerant species, "weeds", invasive weeds dominate, the vegetation structure is disintegrated, or immature (monodominant, even aged spots with a low number of species living together). The vegetation is often fragmented, the soil is usually degraded, more natural habitat could be difficult to identify. If it is possible to identify the original habitat, the state is usually "very bad", the cover of adventive species is mostly very large;
- D03 – Moderately degraded / medium regenerated stage: Natural species dominate, but there are only a few additional elements, sometimes besides of more additional elements there is a high number of disturbance-tolerant species, even the "weeds" can be common, the site is often moderately degraded, vegetation structure is not appropriate (homogeneous, even aged, or unnaturally spotty) / sometimes the structure is better, but the species composition is featureless and almost always a 'more natural' habitat can be designated, but the status is "not good".
- D04 – "Known good", "close-to-natural" / "well" regenerated stage: the vegetation structure is good and/or dominated by natural species, high number of additional elements are presented too, but often there is a low number of disturbance-tolerant species; often vegetation characteristics #3 and #5 combine: I. poorer in species, possibly more weeds, but well structured patch, II. species-rich, but the good structure is missing, III. old forest, but with missing tree species or structure IV. one of the vegetation levels has a much better structure than the other levels (this is the broadest category of naturalness)
- D05 – Natural stage: according to the vegetation type rich in specialist, accompanying and site specific species, well structured, very high value area, the habitat is nationally (regionally) one of the best 10-50-100, weeds and invasive species are missing or hardly any, the site is in a natural state.

6260 Pannonic sand steppes

Classification: Habitats Directive Annex I priority habitat for which the site has been designated, represented on the SDF with representativity in category "B".

The most common close-to-natural habitats of the sandy steppe region of 'Kisalföld' are the open sandy grasslands (*Festucetum vaginatae*), in the planning area, however, the more closed, feather grass (*Stipa pennata*) dominated closed sandy grasslands, and the (on the former forest site evolved) sandy steppe lands (*Astragalo austriacae-Festucetum sulcatae*) are typical. Besides the military use, the grazing was a typical use of these lands. Following the abandonment of grazing the grasslands started to cover by shrubs (*Crataegus monogyna*, *Prunus spinosa*).

The Pannonian sand grasslands occurring in the area (during the original data collection spots mostly marked with the codes G1, H5, O5, O6 Ah-NER (1997)) are characterized by various levels of naturalness-degradation, depending on the previous use of the site. A relatively small part of the habitats belongs to the best (D04 and D05) categories. The largest part of the area can be evaluated as category D03 because of the spread of the invasive plant species and shrubs. During data collection, habitat patches classified to the naturalness categories D01-D02 can only be considered as habitats of community interest, if the typical species of the

original habitat are still clearly recognizable and after an appropriate treatment there is a good chance to restore the habitat.

Typical species are: *Stipa capillata*, *Stipa pennata*, *Stipa borysthena*, *Festuca vaginata*, *Festuca rupicola*, *Koeleria glauca*, *Chrysopogon gryllus*, *Senecio integrifolius*, *Carex liparicarpus*, *Poa angustifolia*, *Phleum phleoides*, *Oxytropis pilosa*, *Fumana procumbens*, *Dianthus serotinus*/*Dianthus arenarius*, *Onosma arenaria*, *Peucedanum oreoselinum*, *Centaurea arenaria*, *Centaurea hiebersteinii*, *Adonis vernalis*, *Alyssum montanum* ssp. *gmelinii*, *Alyssum tortuosum*, *Artemisia campestris*, *Aster linosyris*, *Bromus erectus*, *Dianthus pontederiae*, *Campanula sibirica*, *Potentilla arenaria*, *Linaria genistifolia*, *Veronica prostrata*, *Medicago falcata*, *Scabiosa ochroleuca*, *Arenaria serpyllifolia*, *Euphorbia seguierana*, *Euphorbia cyparissias*, *Minuartia verna*, *Silene otites*, *Solidago virga-aurea*, *Gypsophila fastigiata* ssp. *arenaria*, *Lithospermum officinale*, *Crataegus monogyna*, *Solidago gigantea*.

91N0 Pannonic inland sand dune thicket (Junipero-Populetum albae)

Category: Habitats Directive Annex I priority habitat, however, with representation in category "D" in the SDF, therefore, the site is not designated for this habitat.

The typical Junipero-Populetum albae have been reported in the sandy areas of 'Duna-Tisza-köze' (central part of Hungary). In other sandy regions of the country, however, we can find different sites as well. For example the Junipero-Betuleta in 'Barcs', or the very similar vegetation of the 'Győr-Gönyű-homokvidék', where the juniper is usually missing (or present only by a few individuals) and the white poplar can be recognized in the form of thickets, groves of trees, larger and smaller forest patches. These are very similar to the 'völgyescserjés' type of stocks at the Great Plains, but usually without juniper (juniper may present very sporadic). Besides the white poplar dominance, they are under general spreading of 'dry scrub' species like *Crataegus monogyna*, *Berberis vulgaris* and *Prunus spinosa*.

There are smaller stands occurring in the investment area often mixed with black locust. .

The stand previously described in the mid-west of the area was probably cut in 2005, upon reforestation of the area..

91I0 Euro-Siberian steppe oak woods (Quercus spp.)

Category: Habitats Directive Annex I priority habitat for which the site has been designated, represented on the SDF with representation in category "C"

There is only one single small spot of this habitat in the area, in the western outskirts of 'Györszentiván', near to the cemetery. The habitat patch is structurally the woody grassland type remains of steppe oak woodland; however, as a result of succession the reorganisation of the forest has already begun. Between groups of the old, 100-150 years old pedunculate oaks (*Quercus robur*) shrub covered-forested open sand steppes can be found. The abandonment of grazing in the area assisted the quick reforestation and now the cover of the lower and upper canopy reach 70% in several places. The site is heavily infected by tree of heaven (*Ailanthus altissima*) and black locust (*Robinia pseudoacacia*). Some characteristic species are: *Quercus robur*, *Acer platanoides*, *Populus alba*, *Populus nigra*, *Ligustrum vulgare*, *Rhamnus catharticus*, *Pyrus pyraster*, *Rosa canina*, *Clematis vitalba*, *Berberis vulgaris*, *Prunus mahaleb*, *Teucrium chamaedrys*, *Polygonatum latifolium*, *Adonis vernalis*, *Senecio integrifolius* (rare), *Helianthemum ovatum*, *Stipa pennata*, *Dianthus pontederiae*, *Euphorbia cyparissias*, *Coronilla varia*, *Dactylis glomerata*, *Robinia pseudo-acacia*, *Pinus nigra*, and *Ailanthus altissima*.

The Eastern economic-industrial area

Slightly more than half of the proposed eastern economic-industrial area (195 ha) is covered by the habitats of community interest in the following breakdown:

Code	Name	Area (ha)
6260	Pannonic sand steppes	112
91N0	Pannonic inland sand dune thicket (Junipero-Populetum albae)	4.4
91I0	Euro-Siberian steppe oak woods (Quercus spp.)	0.4

The habitats with no community importance are forest plantations (scotch and black pine, black locust), military objects, and damaged areas.

The Eastern bypass and the connecting road network

The proposed eastern bypass and the connecting road network track on planted black locust and pine forests, but a smaller area of Pannonic sand steppes (6260) are also found here. The trail passes through the remaining single Euro-Siberian steppe oak woods (Quercus spp.) (91I0) habitat fragment. The trail is only 1.3 hectare in extension, however the lagging fragments are expected to be destroyed during the construction, and they will fail to fulfil their ecological function because of their reduced size. Therefore the affected area is larger (about 3 ha).

Code	Name	Area (ha)
6260	Pannonic sand steppes	7.5
91N0	Pannonic inland sand dune thicket (Junipero-Populetum albae)	0.1
91I0	Euro-Siberian steppe oak woods (Quercus spp.)	3

'Dózsa tagi' economic area

The „Dózsa-tagi” economic area is planned in the south of the eastern economic-industrial area and affects only a small part of the Natura 2000 site. The vast majority of habitats here are the recently planted black locust and poplar plantations (formerly agricultural lands). In the western end there is a small patch of Pannonic sand steppes.

Code	Name	Area (ha)
6260	Pannonic sand steppes	2.4

Other developments

The 'Andrásvár' area is mostly cultivated or abandoned, heavily weeded agricultural area, the other part is a black locust plantation established a few years ago. There are no habitat types of community interest. Along the proposed industrial railway modification there are Pannonic sand steppe occurrences. The new track to be establishing during the construction and the construction itself affect an area of 1.0 hectare.

Code	Name	Area (ha)
6260	Pannonic sand steppes	1.0

The **conservation objectives** of the Natura 2000 site 'Gönyüi-homokvidék' are detailed in Annex 10.

1. f) description of the social and economic consequences of the plan or project

The Eastern economic-industrial area

The planned investment project is of overriding public interest for the region of Győr and for the neighbouring Austrian and Slovakian regions, as well. Based on the project data introduced in Chapter 1a, the development is not only of interest for Hungary but could considerably contribute to the economic upsurge of the neighbouring European regions in tight economic relations.

Social consequences of the project

A) Rate of employment

Direct employment

The planned project plays an essential role in sustaining and securing the long-term employment level of the region. The project will create nearly new workplaces on its own and further new positions tightly connected to the main technology will open in the new supplier park by the end of 2018. It is important to mention that 10 % of the jobs created by the project will require highly qualified or specially trained employees. The investment can also help to prevent the labour force from leaving the region and can positively contribute to the training of high quality labour force in large quantities.

Workplaces created indirectly (multiplier effect)

Moreover, the planned project will generate further developments and workplaces in the given and the neighbouring regions among suppliers and service providers.

At conservative estimates, the Hungarian Government expects that on top of the newly created workplaces generated directly by the investor and in the supplier park, the project has the potential to create another workplaces indirectly. It should be noted that the Hungarian Government applies a really conservative estimate as, for example the results of the ACEA survey² suggest that even workplaces can be created indirectly in the region of Győr and in the surrounding greater region, including Austrian and Slovakian regions.

To sum up, the **project will create new workplaces even at the most conservative estimates.**

B) Education, vocational training

² http://www.acea.bc/index.php/news/news_detail/economic_turnoil_hits_vehicle_makers_hard/

The project will contribute to the reform and modernisation of the educational and vocational training structure of the region of Győr to a large extent.

Vocational training

In Hungarian terms, the educational and vocational infrastructure in the fields of specialized engineering and automotive production is already significant in the city of Győr thanks to the strong presence of automotive manufacturers and their suppliers.

The “Lukács Sándor Secondary School for Machine Industry and Mechatronics” has 250 graduates annually (of which 80 pupils specialise in motor vehicle production). The “Jedlik Ányos Secondary School” has 110 graduates annually (of which 70 pupils specialise in motor vehicle production). These institutions make Győr a potential location for the project. The schools provide the basic infrastructure for vocational training and can secure the basis for the long-term labour force supply for the project. At the most conservative estimates, the investment will at least double the number of pupils in this field of education. Furthermore, technological processes and methods currently missing from the curriculum are expected to get included. Regarding sustainability, the most important factor is that the educational materials will be based on the best available technologies and their high quality applications used by the investor. The development of the educational method will be actively supported by the investor.

Education, tertiary education

Regarding tertiary education, the project would create an unprecedented opportunity for the Széchenyi István University (SZE) in Győr. Even today, the University has considerable industrial connections and partnerships, for example with NEMAK Győr Aluminium Foundry Ltd., BorgWarner Turbo Hungary Ltd., Audi Hungária Motor Ltd., and GM Powertrain Hungary Ltd. Some 30 tutors from 5 departments of the university take part in joint research projects in the field of automotive engine- and tool production. The investment could help the university to start automotive R&D activities in new fields (like plate machining, assembly, glazing or cutting-edge material science) based on its industrial partnerships. Involvement in material science research is essentially important as its results play a significant role in turning the automotive industry environmentally conscious.

The partnership opportunities can bring about the establishment of 2-3 new departments that can also get involved in R&D activities and employ further 30-35 tutors in research projects. As a result, the number of tutors in research projects would be doubled.

All in all, the investment could help SZE become a leading university in automotive R&D in Hungary. Moreover, in terms of R&D achievement and prestige, the SZE could rise to the rank of the leading technical universities of Europe (like TU München, TU Hannover, or University of Erlangen), which would bring about a unique and exemplary progress for the whole of Central and Eastern Europe.

C) Acceleration of the region's catch-up to EU-27 average

The investment plays a major role in the catch-up to the EU-27 average. The GDP of the West-Transdanubian region where the investment will be located reaches only 63.75% of the average EU-27 level, thus the significance of this project cannot be neglected.

Economic consequences of the project

Basically, the increase in the national revenue due to the investment will significantly facilitate the accomplishment of the Hungarian convergence programme and the repayment of the stand-by credit provided by the IMF and the EU. Furthermore, the positive impacts on growth and employment can help the Hungarian Government accomplish the EU 2020 programme.

A) Financial-macroeconomic consequences

The impact on the national economy is clearly shown by the fact that **the project alone would contribute to the Hungarian gross national product by 1.8%** based on conservative calculations of the investor.

The primary expectation of the EU and the IMF towards Hungary is the creation and the long-term sustainment of a budget balance. The investment could significantly contribute to accomplishment of these expectations.

As a result of the investment, tax revenues of Hungary (personal income tax, corporate tax, VAT, local taxes etc.) would also increase. At a conservative estimate – based solely on the direct employment of the Hungarian State could calculate with the following nominal revenue upon the start of production:

- annual HUF of corporate tax (upon the start of production until the development tax allowance lasts),
 - o when the development tax allowance runs out, the investor will be obliged to pay ca. HUF corporate tax annually
- annual HUF of VAT and excise duty,
- annual HUF of employment-related tax contribution and
- annual HUF of personal income tax

Based on the above, the annual growth of the budgetary revenues is expected to reach HUF and HUF after the expiry of the development tax allowance respectively.

Furthermore, the newly created workplaces in the connecting supplier park will also be associated with a significant surplus in budget revenue. The revenues coming from the employment-related tax contributions - estimated on the basis of the average wage in the manufacturing industry in the period of January-May 2010 (..... /month; Publication of the Hungarian Statistics Office 'KSH Jelenti 2010/5 Gazdaság és Társadalom' p. 50.) - is expected to reach:

- annual HUF of employment-related tax contribution and annual HUF of personal income tax calculated on the basis of the employment of nearly workers

These items are expected to further increase the budget revenues by a total of 8.3 billion HUF. However, the corporate tax, the VAT and the excise duties coming from the suppliers are not included in the summary of the budget revenues due to the fact that there are no available information or estimates about the revenues and profits of these enterprises. Nevertheless, these items will certainly contribute to the budget revenue to a further extent.

Revenues coming from the personal income tax and employment-related contributions associated with the workplaces created due to the multiplier effect are also not included in the summary. The reason for this is that it is not possible to estimate at this stage how many of the workplaces will be created in Hungary and how many in the neighbouring regions over the border.

In conclusion, the total annual budget revenue of the Hungarian State is expected to increase at conservative estimates by HUF (Euros), and by Forints (Euros) after the expiry of the development tax allowance respectively.

B) Impacts on the balance of foreign trade, the current account and the exchange rate of the Hungarian Forint

The investment has a significantly positive influence on the Hungarian foreign trade balance and thus on the current balance of payment, as 99.8-99.9% of the manufactured products will be sold outside Hungary.

The annual revenue of Forints (Euros) generated by the investor and the regular demand for HUF during the operation have a positive, stabilizing effect on the exchange rate of the Hungarian Forint against the Euro.

C) Indirect effects: effects on foreign direct investments, gain in credibility in the money market

Thanks to its expected international reputation, its positive effects on vocational training and value of the applied technologies, the investment could significantly improve Hungary's global prestige and acknowledgement. In terms of foreign direct investments, it is hardly possible to make an exact estimation about the effects of the project on the region, however, the positive impact on the foreign investors' confidence cannot be questioned.

Moreover, the project can help to strengthen the confidence of the money market towards Hungary and as a result, the marketability of Hungarian government bonds could also significantly improve.

The Eastern bypass and the connecting road network, and the 'Dózsa- tagi' economic area

The planned road network serves to facilitate the operation of the investment and a smooth flow of complex logistical tasks. The connecting road network provides a solution for the commuting traffic from Győr and its surroundings and for public transportation.

On the one hand, the planned developments in the 'Dózsa-tagi' economic area play an important role in solving logistical tasks associated with the investment project but they also facilitate the settlement of new enterprises attracted by the project.

As a result, the social and economic impacts of these developments should be evaluated together and in terms of the investment project, however, they can also be associated with further and sustainable workplaces contributing to the economic upsurge of the region.

Other developments

Economic and social effects of the other developments are relatively minor. In the area of Andrásvár, the planned re-zoning creates favourable conditions for the improvement of cultural value protection (archaeology) and the display of relics. The modification of the military railway line is of utmost public interest; it helps the Hungarian Army to perform its national defence tasks.

1.g) Description of the expected change in nature conditions as a result of the plan or investment

Impacts during the construction

Eastern economic-industrial area

The natural habitats (6260 *Pannonic sand steppes*, 91N0 *Pannonic inland sand dune thicket* (*Junipero-Populetum albae*), 91I0 *Euro-Siberian steppe oak woods* (*Quercus spp.*)) will be destroyed in the planned area of halls and internal roads during the digging and construction work. The artificial "green" areas which will be developed among the various buildings cannot be considered similar to the existing habitats.

From the species of community interest present in the affected area most of the invertebrate species will be destroyed because of the investment, from the vertebrate species amphibians and reptiles may sustain considerable destruction, while from the of mammalian species, only habitat destruction is likely to expect.

During the construction, noise and dust burden is expected but the movements will be mainly on the existing internal roads of the factory area, so their impact to remaining flora and fauna of Natura 2000 sites is considered low.

The Eastern bypass and the connecting road network

The natural habitats (6260 *Pannonic sand steppes*, 91N0 *Pannonic inland sand dune thicket* (*Junipero-Populetum albae*), 91I0 *Euro-Siberian steppe oak woods* (*Quercus spp.*)) will be destroyed on the planned area of road tracks, on the possible construction and deployment areas, as well as on the enclosed areas. From the species of community interest present in the affected area most of the invertebrate species will be destroyed because of the investment, from the vertebrate species amphibians and reptiles may sustain considerable destruction, while from the of mammalian species, only habitat destruction is likely to expect.

During the construction considerable noise and dust is expected, but this burden – taking the linear facility into consideration – applies only temporarily in some sections of the road.

'Dózsa-tagi' economic area

The use of the natural habitat (6260 *Pannonic sand steppes*) of 'Dózsa-tagi' economic area is expected to take place after 10-15 years. It is likely, however, that this habitat (some 2.4 hectares) becomes degraded before this, because of the effects (dust, weed corridor effect, changes in water supply) of the associated road construction (southern part) and the traffic on it.

Other developments

Habitats or species of community interest are not endangered in the Andrásvári area, if the planning and implementation is appropriate. During the construction of the new industrial railway track the habitat 6260, *Pannonic sand steppes* will be destroyed along the track and about 15-17 meters on both side of the track.

Joint effects

The *eastern economic-industrial area and the roads* break apart the so far continuous, economically uniform entity ('Györszentiváni gyakorlótér') to fragments with limited connections, causing a significant *habitat fragmentation*. A significant increase in the *negative edge effect* can be expected.

Development of smaller and larger green areas (e.g. parks, roadside tree planting) can be expected in the investment area. The *planting or spontaneous stocking and spread of non-native or invasive species* may cause a potential harmful effect on the habitats and species of the Natura 2000 site.

Impacts during the operation

Eastern economic-industrial area

Upon completion of the project, no more direct adverse effects are expected, but as indirect effect a serious habitat fragmentation is expected to the entire nature of the area.

The Eastern bypass and the connecting road network

Along the bypass road a *substantial noise and continuous disturbance* is expected during the operation. Because of the expected traffic we can calculate a regular destruction of protected species and species of community interest due to *running over*, which rate can be reduced with the appropriate construction of the road (especially with the construction of ecological passages under the road).

'Dózsa-tagi' economic area

We *do not calculate with further negative effects* in the 'Dózsa-tagi' economic area after the completion of the project, because this area will be fully separated from the remaining habitats by the eastern economic area and by the (planned) roads.

Other developments

Based on the current state of the area we do not expect any negative effects during the establishment of "green arcs" in the Andrásvári development area. The planned rainfall reservoir, with appropriate slope and coastal zone can serve as breeding areas for amphibian species living in the area. To achieve the positive effect, however, it should be ensured already during the detailed planning phase that other habitat elements for amphibian needs (e.g. overwintering sites) will be available as well. During the maintenance of the industrial railway the use of herbicides can cause problems. As a result of herbicide use spontaneous, non-indigenous species can colonize the area along the track without any competition, similar to the situation along the 1-5m wide band of the existing industrial railway.

Joint effects

The *habitat fragmentation* and the increasing *edge effects* will be available during the operation too, so they represent a *long-term harmful effect* on the area's nature. The few hectare large lagging fragments may become unsuitable for some species and the rapid degradation and transformation of those habitats are expected too.

Other effects

Concerning the LIFE08 NAT/H/000289 Life+ project

The planned investments affect the area of a project proposal submitted for the European Commission: LIFE08 NAT / H/000289 (Title: "*Restoration and conservation of priority-listen Pannonian sand habitats in military owned land area of the Little Hungarian Plain*") by the consortium of the following institutions: Ministry of Defence Infrastructure Agency, 'Fertő-Hanság' National Park Directorate, the Ministry of Defence Budapest Forestry Company and the Aquaprofit Engineering, Consulting and Investment Co. The aim of this Life + project is the restoration of sandy grasslands in 'Kisalföld' area formerly used by the army.

Upon completion of the investment, the modification of the contract is necessary; a request for opinion from the Commission on this part is in progress.

The area of the original and expected modified Life+ project is presented in Annex 12.

Damage of protected and strictly protected species under the national laws,

148 of the protected species are shown to occur in the area; nearly two-thirds of these species (95) are birds. The relocation of birds - and partly of the mammal species - is possible (to the remaining areas and to the Natura 2000 areas north of the site), supposing that the implementation is made in an adequate period (beyond the vegetation period). For the populations of the amphibian species the proposed water reserve in the 'Andrásvári' area is favourable, so the temporary decrease of the number of individuals can be followed by a stabilization in the population. Individuals of the protected plant species will decrease on the direct impact area, the mortality can be however reduced by translocation.

Documented protected species in the area are as follows:

Adonis vernalis, *Agrostemma githago*, *Cephalanthera damasonium*, *Corispermum nitidum*, *Dianthus serotinus*, *Gypsophila arenaria*, *Helichrysum arenarium*, *Iris pumila*, *Jurinea mollis*, *Onosma arenaria*, *Orchis militaris*, *Orchis morio*, *Orchis ustulata*, *Oxytropis pilosa*, *Peucedanum arenarium*, *Ranunculus illyricus*, *Stipa pennata*, *Tragopogon floccosus*, *Helix pomatia*, *Epithea bimaculata*, *Mantis religiosa*, *Calliptamus barbarus*, *Myrmeleon formicarius*, *Carabus coriaceus*, *Carabus ullrichi*, *Carabus violaceus*, *Oryctes nasicornis*,

Aromia moschata, *Vanessa atalanta*, *Inachis io*, *Apatura ilia*, *Crocidura leucodon*, *Martes martes*, *Sciurus vulgaris*, *Sorex araneus*, *Talpa europaea*, *Dendrocopus syriacus*, *Parus palustris*, *Sylvia atricapilla*, *Motacilla alba*, *Circus aeruginosus*, *Galerida cristata*, *Upupa epops*, *Saxicola torquata*, *Emberiza citrinella*, *Serinus serinus*, *Phylloscopus collybita*, *Carduelis spinus*, *Bombycilla garrulus*, *Sitta europaea*, *Corvus corone cornix*, *Buteo buteo*, *Turdus philomelos*, *Asio otus*, *Fringilla coelebs*, *Anthus trivialis*, *Dryocopus martius*, *Turdus merula*, *Fringilla montifringilla*, *Turdus pilaris*, *Parus ater*, *Phylloscopus trochilus*, *Remiz pendulinus*, *Luscinia megarhynchos*, *Coturnix coturnix*, *Hirundo rustica*, *Buteo lagopus*, *Picus canus*, *Oenanthe oenanthe*, *Phoenicurus ochruros*, *Passer domesticus*, *Accipiter gentilis*, *Corvus corax*, *Falco subbuteo*, *Cuculus canorus*, *Accipiter nisus*, *Sylvia nisoria*, *Parus caeruleus*, *Circus cyaneus*, *Carduelis cannabina*, *Loxia curvirostra*, *Hippolais icterina*, *Sylvia borin*, *Dendrocopus minor*, *Lanius minor*, *Sylvia curruca*, *Ficedula hypoleuca*, *Dendrocopus medius*, *Caprimulgus europaeus*, *Turdus viscivorus*, *Strix aluco*, *Alauda arvensis*, *sylvia communis*, *Delichon urbica*, *Emberiza schoeniclus*, *Dendrocopos major*, *Lanius excubitor*, *Jynx torquilla*, *Troglodytes troglodytes*, *Aegithalos caudatus*, *Riparia riparia*, *Asio flammeus*, *Anthus pratensis*, *Saxicola rubetra*, *Regulus regulus*, *Oriolus oriolus*, *Apus apus*, *Sturnus vulgaris*, *Phylloscopus sibilatrix*, *Emberiza calandra*, *Pyrrhula pyrrhula*, *Parus major*, *Turdus iliacus*, *Muscicapa striata*, *Carduelis carduelis*, *Lanius collurio*, *Streptopelia turtur*, *Falco tinnunculus*, *Erithacus rubecula*, *Picus viridis*, *Carduelis chloris*, *Ciconia ciconia*, *Ciconia nigra*, *Tyto alba*, *Merops apiaster*, *Falco cherrug*, *Haliaeetus albicilla*, *Falco peregrinus*, *Passer montanus*,

2. Negative effects

Summary of the assessment of the negative effects on the site

The plan in question is the modification of the development plan of the city of Győr, concerning the presented areas (hereinafter referred to as the development plan). The central element of this plan is the designation of the economic-industrial area, based on its recourse – parallel to the modification of the development plan – the investment planning is running.

Potential effects are due to the completion of the additional elements of the development plan and due to the planned investment cumulative; therefore the effects of the development plan and the investment implications should be considered together.

The proposed development concerns the special conservation area HUFH20009 'Gönyői homokvidék'.

- In the planning and investment area the following Habitats Directive Annex I habitats of community interest occur: *Pannonic sand steppes* (6260) 122.9ha, *Pannonic inland sand dune thicket (Junipero-Populetum albae)* (91N0) 4.5ha and *Euro-Siberian steppe oak woods (Quercus spp.)* (91I0) 3.4ha. The expected additional negative effects of the investment affect an additional 20ha *Pannonic sand steppe* (6260), 3.6ha *Euro-Siberian steppe oak woods (Quercus spp.)* (91I0) and 1.0ha *Pannonic inland sand dune thicket (Junipero-Populetum albae)* (91N0) habitat.
- In the affected area alone 500 individuals of the sand iris (*Iris humilis* ssp. *arenaria*) and several thousands of the Hungarian carabus (*Carabus hungaricus*) – both of them are Habitats Directive Annex II species for which the site has been designated – live.
- The most significant direct effects of the planned investments are the destruction of Habitats Directive Annex I habitats and Annex II species, while from the indirect

effects the habitat fragmentation and the constant interference by roads can be highlighted.

- The adverse effects caused by the investments cannot completely be eliminated by the mitigation measures, therefore if the plan and the investment is granted, compensatory measures are necessary.
- For the compensatory measures three proposals have been developed. No. I. has habitat restoration and improvement measures on the damaged Natura 2000 areas. No. II. variant preserves the coherence of the Natura 2000 network by creating new Natura 2000 sites in lieu of the damaged habitats and species. No. III. variant ensure – besides the conservation status of the affected habitats and species – the restoration and improvement measures of the damaged area with the assignment of new areas and improvement measures undertaken for the conservation of other Natura 2000 sites.

Description of the expected negative effects on the marker habitats and species of the Natura 2000 area

Destruction or conversion of habitats of community interest

The current natural habitats – including the habitats of community interest in the Eastern economic-industrial area and the 'Dózsa tagi' area – will be destroyed in 1-5 years (depending on the timing of the investment) because of the kind of the planned land use.

Destruction of habitats of community interest is expected also in the affected area of the Eastern bypass and the connecting road network and by the industrial railway correction.

In the Andrásvári area, the Habitats Directive Annex I habitat will not be damaged.

From the Annex I habitats first of all the Pannonic sand steppe (6260) will be affected, while Pannonic inland sand dune thicket (*Junipero-Populctum albae*) (91N0) and Euro-Siberian steppe oak woods (*Quercus* spp.) (91I0) will be affected too. The rate of involvement of certain habitat types is described in the following chapter.

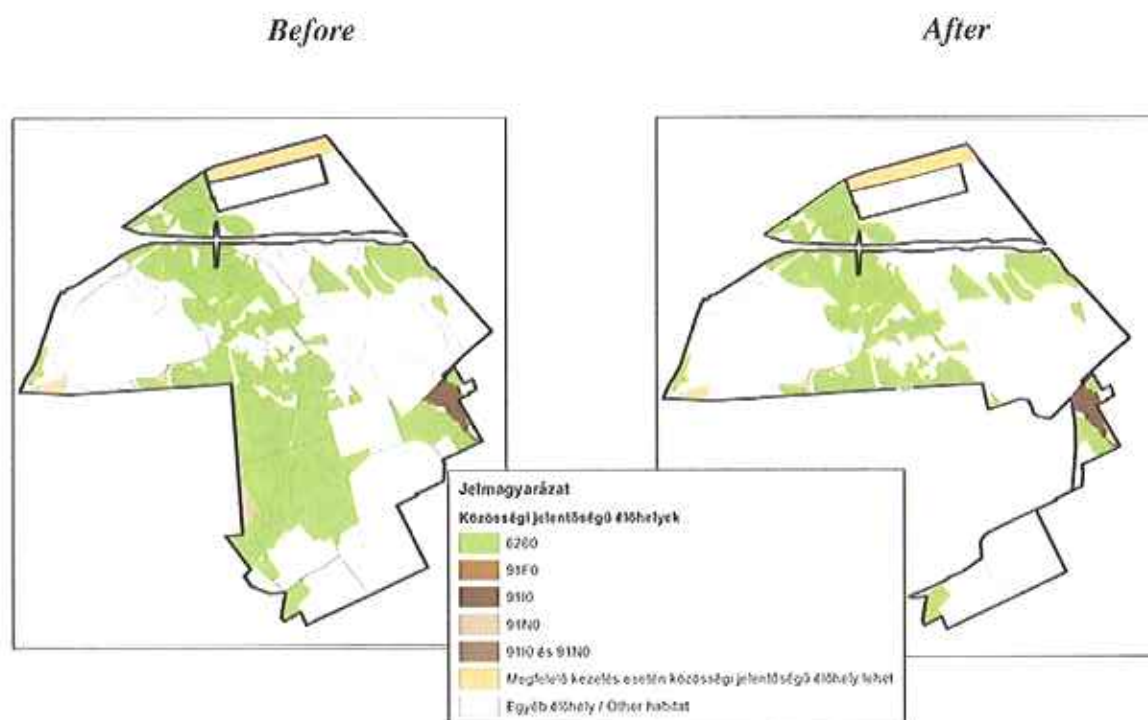
Destruction or disturbance of individuals of species with community interest

Sand iris (*Iris humilis* ssp. *Arenaria*) populations living on the proposed economical-industrial areas and along the linear facilities (roads and railways) are expected to be destroyed. The situation is the same for the Hungarian carabus (*Carabus hungaricus*) living in the same area. Although the beetles can move, they can not escape the bulldozer. There are only 2-3 old grow trees in the area, where the individuals of the great capricorn beetle (*Cerambyx cerdo*), and the stag beetle (*Lucanus cervus*) are found. We can expect the mortality of a few individuals, however, along the roundabout there are dozens of suitable oak (dying and drying standing or fallen) trees, so a significant part of the population will die here too.

Habitat fragmentation, increasing edge effect and isolation

The planned investment (the establishment of the Eastern economic-industrial area) itself will cut the southern part of the 'Győrszentiváni gyakorlóter' (area: 631 ha District: 13.564 km), into two not connected parts. The smaller area is only 51 ha, the larger is 385 ha. The narrow band between Győrszentiván and the centre has only limited capacity for the conservation of Habitats Directive Annex I habitats and Annex II species, the connection between the two parts of the area is hereby eliminated.. The perimeter of the two parts is 11.9 km and 3.9 km, giving a total of 15.8 km. Because of the fragmentation the negative edge effect (e.g. disturbance, trampling, penetration of invasive plants, etc) will increase significantly.

Taking the occurrence of habitats of community interest in the southern part into consideration (in the case of the achievement of the Eastern economic and industrial area), the Pannonic sand steppes will be destroyed in the central part of the current area and only scattered fragments will survive in the remaining areas.



Legend:

Title: Habitats with Community interest

(Light yellow colour) „Megfelelő kezelés esetén közösségi jelentőségű élőhely lehet”: Can be a habitat with Community interest upon appropriate handling

In some parts (currently covered by habitats with no community interest, except the barrack area) of the remaining area – after the investments have been made – with an appropriate treatment (state-improvements, habitat restoration) habitats of community interest can be developed.

The smaller part will be – if the plan will be implemented – surrounded by industrial areas, but even this area may be suitable for some species.

	Original situation	New situation		
		Mosaic 1	Mosaic 2	Altogether
Area (m ²)	6314134	3851998	519986	4371984
Perimcter (m)	13564	11950	3964	15914
Ratio (area/perimeter)	1771	322,34	131,18	274,73

Examining the investment together with the realization of the eastern bypass and the connecting road network construction, the implementation will cause further – in ecological sense unfavourable – fragmentation.