DIAĽNICA D4 BRATISLAVA, JAROVCE – IVANKA SEVER

Návrh kompenzačných opatrení

NÁRODNÁ DIAĽNIČNÁ SPOLOČNOSŤ

Národná diaľničná spoločnosť, a.s., Mlynské Nivy 45, 821 09 Bratislava

DOPRAVOPROJEKT®

DOPRAVOPROJEKT, a.s., Kominárska 2, 832 03 Bratislava

HBH® projekt

HBH Projekt spol. s r.o., Kabátníkova 216/5, 602 00 Brno

Banská Bystrica, júl 2014

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I. ZÁKLADNÉ ÚDAJE O NAVRHOVATEĽOVI

I.1. Názov

Národná diaľničná spoločnosť, a.s.

I.2. Identifikační číslo

35 919 001

I.3. Sídlo

Mlynské nivy 45, 821 09 Bratislava

I.4. Meno, priezvisko, adresa, telefónne číslo a iné kontaktné údaje oprávneného zástupcu navrhovateľa

Ing. Pavol Kováčik, PhD., MBA

investičný riaditeľ a podpredseda predstavenstva,
Národná diaľničná spoločnosť , a.s., Mlynské Nivy 45, 821 09 Bratislava,
tel.: 02/58311111

I.5. Meno, priezvisko, adresa, telefónne číslo a iné kontaktné údaje osoby, od ktorej možno získať relevantné informácie o navrhovanej činnosti a navrhovaných kompenzačných opatreniach

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I.6. Informácia o tom, či návrh obsahuje informácie, ktorých zverejnenie nie je možné a prečo

Projekt neobsahuje žiadne informácie, ktoré nie je možné zverejniť.

II. POPIS PLÁNU ALEBO PROJEKTU

II.1. Názov plánu alebo projektu

Diaľnica D4 Bratislava, Jarovce – Ivanka sever

II.2.Stručný popis plánu alebo projektu, ktorý ovplyvňuje lokalitu sústavy chránených území

Stavba „Diaľnica D4 Bratislava, Jarovce – Ivanka sever“ začína napojením na existujúcu diaľnicu D2 v MÚK „Jarovce“, na území hl.m. SR Bratislava, v MČ BA – Jarovce. Diaľnica D4 je vedená v trase:

- ***v úseku od km 0,000 - 4,851***, severne od Jaroviec v trase variantu „E“ – zeleného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), mimoúrovňovo mostmi ponad cestu III/2046, ponad železničnú trať Bratislava – Rusovce a nad preložkou cesty I/2 v MÚK „Rusovce“, ďalej mostom ponad Jarovecké rameno, výhľadovou veslárskou dráhou a ponad rieku Dunaj, ďalej na ľavom brehu Dunaja estakádou cez chránené územie európskeho významu SKÚEV 0295 Biskupické Luhy (Natura 2000), mimo PR Gajc. Negatívne dopady prechodu diaľnice D4 cez toto územie budú eliminované vedením diaľnice na estakáde (celková dĺžka estakády je 3 152 m).
- ***v úseku od km 4,851 – 8,500*** trasa diaľnice D4 prechádza z variantu „E“ – zeleného do variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), pričom obchádza ťažobný priestor štrkopieskov Podunajské Biskupice z južnej a z východnej strany. V km 6,736 D4 mimoúrovňovo podcestím križuje plánovanú rýchlostnú cestu R7 v MÚK „Ketelec“ a v km 7,962 podcestím prístupovú cestu k horárni Topoľové. Trasa diaľnice D4 je oproti pôvodnej trase, posudzovanej v procese EIA, v zmysle odporúčaní Záverečného stanoviska procesu EIA č. 5461/07-7.3/ml pre R7 Bratislava – Dunajská Lužná z 9.5.2009, v MÚK „Ketelec“ odsunutá o cca 235 m severnejšie, pričom umiestnenie diaľnice D4, rýchlostnej cesty R7 a tvar MÚK „Ketelec“ vychádza z modrého variantu (A2), odporúčaného v TŠ „Rýchlostná cesta R7 Bratislava Ketelec – Bratislava Prievoz a z riešenia navrhnutého v DÚR „Rýchlostná cesta R7 Bratislava – Dunajská Lužná“. Medzi km 8,300 až km 9,350 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“.
- ***v úseku od km 8,500 – 15,000*** trasa diaľnice D4 pokračuje v trase variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011) v k.ú. Podunajské Biskupice, kde mimoúrovňovo nadcestím križuje starú dunajskú hrádzu (kultúrna a technická pamiatka), cestu I/63 v MÚK „Rovinka“ medzi Podunajskými Biskupicami a obcou Rovinka, areál Strabag-u, a.s. obchádza z južnej strany, mimoúrovňovo mostom križuje železničnú trať Bratislava – Dunajská Streda, mimoúrovňovo podcestím križuje Vinohradnícku ulicu medzi Podunajskými Biskupicami a obcou Miloslavov. V km 14,500 sa v budúcnosti plánuje vybudovať mimoúrovňovú križovatku „Podunajské Biskupice“ (D4 s R1). Ďalej trasa diaľnice D4 pokračuje západne od obce Most pri Bratislave.
- ***v úseku od km 15,000 – 22,590076*** trasa diaľnice D4 pokračuje v trase variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), s upresnením smerového vedenia diaľnice D4 podľa odporučeného variantu v TŠ „Diaľnica D4 Bratislava, km 15,0 – križovatka Ivanka sever – križovatka Rača“ (spracovalo v 10.2012 Združenie „ D4 Bratislava, Jarovce – Rača“) na podkladoch geodetického zamerania terénu, pri rešpektovaní ochranných pásiem

a záujmov letiska M.R.Štefánika. Trasa diaľnice D4 pokračuje západne od obce Most pri Bratislave, kde v MÚK „Most pri Bratislave“ mimoúrovňovo križuje cestu II/572, mostom križuje rieku Malý Dunaj zo západu obchádza štrkovisko Zelená voda, obchádza letisko M.R.Štefánika, pokračuje v súbehu so Šúrskym kanálom západne od obce Ivanka pri Dunaji, mimoúrovňovo križuje cestu I/61 Bratislava – Senec v MÚK „Ivanka – západ“, mimoúrovňovo mostom križuje železničnú trať Bratislava - Štúrovo a končí v MÚK „Ivanka – sever“, napojením na existujúcu diaľnicu D1, pričom diaľnica D4 je vedená popod existujúcu D1.

Celková dĺžka riešeného úseku je 22,590 076 km.

II.3. Opis a lokalizácia všetkých aktivít a častí projektu s možným dosahom na biotopy európskeho významu, druhy európskeho významu, biotopy druhov európskeho významu, vtáky vrátane sťahovavých druhov a ich biotopy a celkovú koherenciu európskej sústavy chránených území

V úseku od km cca 2,600 až 5,300 bude stavba prechádzať územím lokalít sústavy Natura 2000 (km 2,674 – 4,584 cez CHVÚ Dunajské Luhy, km 4,584 – 5,320 cez ÚEV Biskupické luhy). Celé chránené územie prechádza na estakáde dĺžky 3152 m, priľahlé úseky diaľnice D4 sú vedené v násype, resp. na menších mostných objektoch.

V úseku prechodu cez chránené územia budú pod estakádou zlikvidované lesné biotopy a vyrúbané stromy v nevyhnutnom rozsahu (dočasný záber stavby) vrátane brehových porastov, ďalej dôjde k záberu trávnych porastov a záberu poľnohospodárskej pôdy.

Okrem samotných záberov potrebných plôch bude výstavba a prevádzka diaľnice znamenať nový prírastok emisného zaťaženia územia a rušenie v podobe hluku a ľudských aktivít spojených hlavne s výstavbou diaľnice.

Súčasťou zámeru je aj prepojenie ľavobrežnej a pravobrežnej cyklotrasy pomocou mostov na D4, čo so sebou prinesie nárast turistických aktivít aj na ľavom brehu Dunaja, teda do oblasti, ktorá nebola doposiaľ intenzívnejšie využívaná, z dôvodu horšej dostupnosti než pravá strana rieky. Tým sa automaticky zvýši aj rušivý vplyv na okolitú oblasť.

Vodné plochy pod mostmi budú dotknuté iba v mieste výstavby pilierov vo vodnom toku (s umiestnením pilierov priamo do vodného toku sa ráta iba v hlavnom toku Dunaja).

Všetky vyššie menované aktivity človeka v súvislosti s diaľnicou D4 ako samotná výstavba a prevádzka diaľnice a rozvoj turistických aktivít v území budú znamenať nové vplyvy v území, v rátanie dopadov na celkovú koherenciu európskej sústavy chránených území.

Tieto aktivity je možno zhrnúť nasledovne:

- priamy záber biotopov
- ovplyvnenie využívania hniezdnych a potravných biotopov, či iného využívania územia dotknutých predmetov ochrany vplyvom hluku a emisiami pochádzajúcimi z diaľnice
- nárast turistických aktivít v území zvýšením rozsahu cyklotrás a ich vzájomného prepojenia s čím bude spojený nárast hlučnosti a priameho ovplyvňovania predmetov ochrany (vedome či nevedome usmrcovanie jedincov, priame či nepriame zásahy do biotopov)

III. POSÚDENIE NEGATÍVNYCH ÚČINKOV

III.1. Názov a kód ovplyvnených lokalít sústavy chránených území

Na základe identifikovaných vstupov a výstupov zámeru, na základe situovania zámeru v území a na základe ďalších podstatných charakteristík územia boli, ako dotknuté, zvolené nasledujúce Územia európskeho významu (ďalej tiež ÚEV) a Chránené vtáčie územie (ďalej tiež CHVÚ):

CHVÚ Dunajské luhy (SKCHVU007)
ÚEV Biskupické luhy (SKUEV0295)
CHVÚ Sysľovské polia (SKCHVU029)
ÚEV Ostrovné lúčky (SKUEV0269)
CHVÚ Malé Karpaty (SKCHVU014)
ÚEV Bratislavské luhy (SKUEV0064)

V širšom okolí zámeru sa nachádzajú ďalšie ÚEV, ktoré však boli posúdené ako zámerom neovplyvnené. Dôvodom je najmä vzdialenosť lokalít od zámeru vztiahnutá na predmety ochrany, pre ktorých ochranu boli tieto lokality sústavy Natura 2000 vyhlásené a veľkosť ich teritórií (teda zváženie možnosti výskytu predmetu ochrany v blízkosti zámeru, či iný druh ovplyvnenia zámerom).

Jedná sa o tieto lokality:

ÚEV Hrušov (SKUEV0270)
ÚEV Šúr (SKUEV0279)
ÚEV Homoľské Karpaty (SKUEV0104)

III.2. Predmet ochrany ovplyvnených lokalít sústavy chránených území

CHVÚ Dunajské luhy

Tab. 1: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[1]			Počet zimujúcich jedincov v SR[2]
		v CHVÚ	v SR	v EU (tis.)	
bocian čierny	*Ciconia nigra*	4 - 6	400 - 600	7,8 - 12	0 - 2
brehuľa hnedá	*Riparia riparia*	180 - 420	10 – 20 tis.	5400 - 9500	0
bučiačik močiarny	*Ixobrychus minutus*	12 - 34	200 - 400	60 – 120	0
čajka čiernohlavá	*Larus melanocephalus*	30 - 70	50 - 125	120 - 320	0

[1]Reporting čl. 12 v 1.1, Databáza, citováno 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/, Evropská agentura ochrany přírody, citováno 4.2. 2014. Dostupné na: http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=SKCHVU007

[2] Reporting čl. 12 v 1.1, Databáza, citováno 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/

haja tmavá	*Milvus migrans*	5 - 6	15 - 20	64 - 100	0
hlaholka severská	*Bucephala clangula*	0	0	490 - 590	9000
hrdzavka potápavá	*Netta rufina*	7 - 18	10 - 40	27 - 59	0 - 10
chochlačka sivá	*Aythya ferina*	0	500 - 1000	210 - 440	6300 - 6900
chochlačka vrkočatá	*Aythya fuligula*	0	250 - 500	730 - 880	25000 - 27000
kačica chrapľavá	*Anas querquedula*	1 - 7	100 - 200	390 - 590	0 - 30
kačica chripľavá	*Anas strepera*	12 - 21	50 - 80	60 - 96	0 - 240
kalužiak červenonohý	*Tringa totanus*	3 - 8	35 - 70	280 - 610	0
kaňa močiarna	*Circus aeruginosus*	7 - 16	1000 - 1500	93 - 140	0
ľabtuška poľná	*Anthus campestris*	4 - 6	200 - 250	1000 - 1900	0
orliak morský	*Haliaeetus albicilla*	1 - 4	10 - 14	5 – 6,6	40 - 80
potápač biely	*Mergellus albellus*	0	0	8,1 - 17	100 - 700
rybár riečny	*Sterna hirundo*	110 - 240	810 - 815	270 - 570	0
rybárik riečny	*Alcedo atthis*	20 - 45	700 - 1300	79 - 160	700 - 1400
volavka striebristá	*Egretta garzetta*	2 - 5	0 - 30	68 - 94	0

ÚEV Biskupické luhy

ÚEV Biskupické luhy bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotop (* označuje prioritný biotop)
3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a /alebo ponorených cievnatých rastlín typu Magnopotamion alebo Hydrocharition
6210 Suchomilné travinnobylinné a krovinové porasty na vápnitom podloží (*dôležité stanovištia Orchideaceae)
91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek
91G0* Karpatské a panónske dubovo-hrabové lesy
91H0* Teplomilné panónske dubové lesy

Druh (* označuje prioritný druh)
hlaváč bieloplutvý (*Cottus gobio*)
kunka červenobruchá (*Bombina bombina*)
roháč obyčajný (*Lucanus cervus*)
fuzáč veľký (*Cerambyx cerdo*)
hrúz Kesslerov (*Gobio kessleri*)
hrebenačka vysoká (*Gymnocephalus baloni*)
bobor vodný (*Castor fiber*)
hraboš severský panónsky* (*Microtus oeconomus mehelyi*)

CHVÚ Sysľovské polia

Tab. 2: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[3]			Počet zimujúcich jedincov v CHVÚ	Počet zimujúcich jedincov v SR
		v CHVÚ	v SR	v EU (tis.)		
drop fúzatý	*Otis tarda*	3-5	10	31 - 36	100	150 - 200
hus bieločelá	*Anser anbifrons*	0	0	62 - 72	1500	3700 – 4600
hus siatinná	*Anser fabalis*	0	0	140	2500	2500
sokol červenonohý	*Falco vespertinus*	5 - 20	5 - 20	26 - 39	0	0

ÚEV Ostrovné lúčky

ÚEV Ostrovné lúčky bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotopy (* označuje prioritný biotop)

91E0* Lužné vŕbovo-topoľové a jelšové lesy

3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition*

6210 Suchomilné trávno-bylinné a krovinové porasty na vápnitom podloží (*dôležité stanovištia *Orchideaceae*)

91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek

Druh

plocháč červený *(Cucujus cinaberinus)*
vážka *(Leucorrhinia pectoralis)*
roháč obyčajný *(Lucanus cervus)*
fuzáč veľký *(Cerambyx cerdo)*
hrúz Kesslerov *(Gobio kessleri)*
hrúz bieloplutvý *(Gobio albipinnatus)*
hlaváč bieloplutvý *(Cottus gobio)*
hrebenačka vysoká *(Gymnocephalus baloni)*
kolok vretenovitý *(Zingel streber)*
lopatka dúhová *(Rhodeus sericeus amarus)*
kunka červenobruchá *(Bombina bombina)*
mlok dunajský *(Triturus dobrogicus)*
netopier obyčajný *(Myotis myotis)*
bobor vodný *(Castor fiber)*

[3] http://natura2000.eea.europa.eu (citované 17.3.2014) – údaje z 10/2012,

CHVÚ Malé Karpaty

Tab. 3: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[4]			Počet zimujúcich jedincov v SR
		v CHVÚ[5]	v SR	v EU (tis.)	
sokol károh	*Falco cherug*	4	19 - 45	360 - 540	10 - 25
včelár lesný	*Pernis apivorus*	40	900 - 1300	110 - 160	0
ďateľ prostredný	*Dendrocopos medius*	300	2500 - 4000	140 - 310	4000 – 10000
ďateľ bielochrbtý	*Dendrocopos leucotos*	60	1500 - 2500	180 - 550	3000 - 6000
ďateľ hnedkavý	*Dendrocopos syriacus*	50	1500 - 2500	530 - 1100	2500 - 5000
ďateľ čierny	*Dryocopus martius*	60	1500 - 2500	740 - 1400	4500 - 6500
výr skalný	*Bubo bubo*	13	300 - 400	19 - 38	700 - 1000
bocian čierny	*Ciconia nigra*	6	400 - 600	7,8 - 12	0 - 2
lelek lesný	*Caprimulgus europaeus*	15	1000 - 2000	470 - 1000	0
sokol sťahovavý	*Falco peregrinus*	3	120 - 150	12 - 25	5 - 10
muchárik bielokrký	*Ficedula albicollis*	3900	70000 - 150000	1400 - 2400	0
muchárik červenohrdlý	*Ficedula parva*	500	5000 – 10000	1200 - 10000	0
strakoš červenochrbtý	*Lanius collurio*	1400	65000 - 130000	6300 - 13000	0
žlna sivá	*Picus canus*	100	1500 - 2000	180 - 320	3500 - 6000
penica jarabá	*Sylvia nisoria*	250	3000 - 6000	460 - 1000	0
prepelica poľná	*Coturnix coturnix*	50	2000 - 6000	730 - 2400	0
krutihlav hnedý	*Jynx torquilla*	400	2500 - 4000	580 - 1300	0
muchár sivý	*Muscicapa striata*	1000	65000 - 150000	6000 - 19000	0
žltochvost lesný	*Phoenicurus phoenicurus*	600	10000 - 15000	6800 - 16000	0
pŕhľaviar čiernohlavý	*Caxicola torquata*	1000	30000 - 50000	2000 - 4600	0
hrdlička poľná	*Streptopelia turtur*	600	15000 - 30000	3500 - 7200	0
orol kráľovský	*Aquila heliaca*	3	35 - 40	850 - 1400	20 - 50

[4] http://atlas.vtaky.sk, Kopecká (2011), http://natura2000.eea.europa.eu, Reporting čl. 12 v 1.1, Databáza, citované 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/

[5] údaje z roku 2005

ÚEV Bratislavské luhy

ÚEV Bratislavské luhy bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotopy (* označuje prioritný biotop)

91E0* Lužné vŕbovo-topoľové a jelšové lesy

3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition*

3260 Nížinné až horské vodné toky s vegetáciou zväzu *Ranunculion fluitantis* a *Callitricho-Batrachion*

91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek

Druh:

plocháč červený	*(Cucujus cinnaberinus)*
hlaváč bieloplutvý	*(Cottus gobio)*
kunka červenobruchá	*(Bombina bombina)*
priadkovec trnkový	*(Eriogaster catax)*
roháč obyčajný	*(Lucanus cervus)*
ohniváčik veľký	*(Lycaena dispar)*
uchaňa čierna	*(Barbastella barbastellus)*
netopier obyčajný	*(Myotis myotis)*
netopier pobrežný	*(Myotis dasycneme)*
lopatka dúhová	*(Rhodeus sericeus amarus)*
modráčik krvavcový	*(Maculinea teleius)*
korýtko riečne	*(Unio crassus)*
kolok vretenovitý	*(Zingel streber)*
hrúz Kesslerov	*(Gobio kessleri)*
mora Schmidtova	*(Dioszeghyana schmidtii)*
mlynárik východný	*(Leptidea morsei)*
vážka	*(Leucorrhinia pectoralis)*
hrebenačka vysoká	*(Gymnocephalus baloni)*
hrúz bieloplutvý	*(Gobio albipinnatus)*
mlok dunajský	*(Triturus dobrogicus)*
hnedáčik chrastavcový	*(Euphydryas aurinia)*
potápnik	*(Graphoderus bilineatus)*
pĺž zlatistý	*(Sabanejewia aurata)*
bobor vodný	*(Castor fiber)*

III.3. Ciele ochrany lokalít a najdôležitejšie prvky, ktoré prispievajú k integrite lokalít

CHVÚ Dunajské luhy

- **zabezpečenia priaznivého stavu biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** bociana čierneho, brehule hnedej, bučiačika močiarneho, čajky čiernohlavej, haje tmavej, hlaholky severskej, hrdzavky potápavej, chochlačky sivej, chochlačky vrkočatej, kačice chrapľavej, kačice chripľavej, kalužiaka červenonohého, kane močiarnej, ľabtušky poľnej, orliaka morského, potápača bieleho, rybára riečneho, rybárika riečneho, volavky striebristej a zabezpečenia podmienok ich prežitia a rozmnožovania.
- **zabezpečenia priaznivého stavu biotopov a zabezpečenia podmienok prežitia a rozmnožovania sťahovavých vodných druhov vtákov vytvárajúcich zoskupenia počas migrácie alebo zimovania.** Jedná sa najmä o tieto druhy: kalužiak riečny, kačica ostrochvostá, kačica lyžičiarka, kačica chrapkavá, kačica hvízdavá, kačica divá, kačica chripľavá, hus bieločelá, hus divá, hus siatinná, volavka popolavá, chochlačka sivá, chochlačka vrkočatá, chochlačka morská, chochlačka bielooká, hlaholka severská, labuť spevavá, labuť hrbozobá, volavka biela, lyska čierna, močiarnica mekotavá, sliepočka zelenonohá, potáplica severská, potáplica štíhlozobá, čajka bielohlavá, čajka sivá, čajka smejivá, močiarnica tichá, turpan tmavý, turpan čierny, potápač biely, potápač veľký, potápač dlhozobý, hrdzavka potápavá, kormorán veľký, potápka chochlatá, potápka červenokrká, potápka čiernokrká, chraštieľ vodný, potápka hnedá, kalužiak perlavý.

Územie reprezentuje hlavný tok rieky Dunaj a jej ľavý breh s lužnými lesmi. Dostatok prirodzených vodných biotopov (vodných tokov, močiarov), ale aj umelých vodných nádrží poskytuje dobré predpoklady pre hniezdenie volavky striebristej (*Egretta garzetta*), bučiačika močiarneho (*Ixobrychus minutus*), rybára riečneho (*Sterna hirundo*), kačice chrapľavej (*Anas querquedula*), kalužiaka červenonohého (*Tringa totanus*). Prítomnosť lesných biotopov, zvlášť vysokokmenných porastov, s výskytom hniezdísk orliaka morského (*Haliaeetus albicilla*), bociana čierneho *(Ciconia nigra)* a haje tmavej (*Milvus migrans*) ešte viac znásobuje hodnotu chráneného vtáčieho územia.

ÚEV Biskupické luhy

- **ochrana biotopov európskeho významu**: Teplomilné panónske dubové lesy (91H0), Karpatské a panónske dubovo-hrabové lesy (91G0), Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0) a druhov európskeho významu: fuzáč veľký (Cerambyx cerdo), roháč obyčajný (Lucanus cervus), Dioszeghyana schmidtii, hlaváč bieloplutvý (Cottus gobio), hrebenačka vysoká (Gymnocephalus baloni), hrúz Kesslerov (Gobio kessleri), kunka červenobruchá (Bombina bombina) a bobor vodný (Castor fiber).

Okrem typických lužných lesov sú tu predmetom ochrany tiež karpatské a panónske dubovo-hrabové lesy, teplomilné panónske dubové lesy, prirodzené eutrofné a mezotrofné stojaté vody, suchomilné trávno-bylinné a krovinové porasty na vápnitom podloží. Kontrast veľmi vlhkých a veľmi suchých biotopov na pomerne malej ploche je tu predpokladom pre obrovskú druhovú pestrosť rastlinstva a živočíšstva s výskytom mnohých vzácnych a ohrozených druhov.

CHVÚ Sysľovské polia

- **zachovania biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** dropa fúzatého, husi bieločelej, husi siatinnej, sokola červenonohého a **zabezpečenia podmienok ich prežitia a rozmnožovania**

Územie predstavuje panónsky typ nížiny zastúpený prevažne agrocenózami a riedkymi pásmi vetrolamov a krovín, zväčša sekundárnymi xerotermnými až semixerotermnými druhovo bohatými trávno-bylinnými spoločenstvami na spraši ach a naplaveninách rieky Dunaj. Trsnaté druhy tráv a zapojený vegetačný kryt udávajú vzhľad biotopu, ktorý na úhorových plochách polí pripomína lúčne spoločenstvá. Prevažná časť územia je však poľnohospodársky intenzívne využívaná – cieľovými plodinami sú prevažne kultúry obilnín, porasty lucerny, slnečnice a repky olejnej. Vetrolamové pásy a kroviny sú tvorené predovšetkým agátom, pajaseňom žliazkatým, javorom poľným, divou hruškou a bazou.

ÚEV Ostrovné lúčky

- **ochrana biotopov európskeho významu**: Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0), Lužné vŕbovo-topoľové a jelšové lesy (91E0), Suchomilné travinnobylinné a krovinové porasty na vápnitom podloží (6210), Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu Magnopotamion alebo Hydrocharition (3150) a druhov európskeho významu: fuzáč veľký (Cerambyx cerdo), plocháč červený (Cucujus cinnaberinus), roháč obyčajný (Lucanus cervus), vážka (Leucorrhinia pectoralis), hlaváč bieloplutvý (Cottus gobio), kolok vretenovitý (Zingel streber), hrebenačka vysoká (Gymnocephalus baloni), býčko (Proterorhinus marmoratus), lopatka dúhová (Rhodeus sericeus amarus), hrúz Kesslerov (Gobio kessleri), hrúz bieloplutvý (Gobio albipinnatus), kunka červenobruchá (Bombina bombina), mlok dunajský (Triturus dobrogicus), bobor vodný (Castor fiber) a netopier obyčajný (Myotis myotis).

Územie európskeho významu Ostrovné lúčky zahŕňa zachované fragmenty pôvodne rozsiahlych lužných lesov popri toku Dunaja, lokalizované na jeho pravom brehu v blízkosti Rusoviec a Čunova. Na pomerne malom území sa tu striedajú biotopy mäkkého a tvrdého lužného lesa, stojatých vôd a ramien – v ostrom kontraste s veľmi vzácnymi suchomilnými trávnatými spoločenstvami. Takéto suché miesta sú lokalizované na miestach mohutných naplavenín štrku, siahajúcich vysoko nad hladinu podzemnej vody.

CHVÚ Malé Karpaty

- **zachovania biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** sokola rároha, včelára lesného, ďatľa prostredného, výra skalného, lelka lesného, bociana čierneho, ďatľa bielochrbtého, ďatľa hnedkavého, ďatľa čierneho, sokola sťahovavého, muchárika bielokrkého, muchárika červenohrdlého, strakoša červenochrbtého, žlny sivej, penice jarabej, prepelice poľnej, krutihlava hnedého, muchára sivého, žltochvosta lesného, prhľaviara čiernohlavého, hrdličky poľnej a orla kráľovského a **zabezpečenia ich prežitia a rozmnožovania.**

V CHVÚ Malé Karpaty sú rozšírené prevažne lesné biotopy v rozpätí 1. vegetačného (dubový) až 4. vegetačného stupňa (bukový). Trávno-bylinné porasty, ako aj kriačinové spoločenstvá, zaberajú neveľké výmery v okrajových častiach územia a v dolinách lesných komplexov. Do CHVÚ boli zaradené aj časti vinohradov prevažne na úpätí východných svahov Pezinských Karpát. Osobitný biotop vtákov predstavujú početné skalné útvary so skalnými stenami v hrebeňovej časti Pezinských Karpát.

ÚEV Bratislavské luhy

- **ochrana biotopov európskeho významu**: Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0), Lužné vŕbovo-topoľové a jelšové lesy (91E0), Nižinné až horské vodné toky s vegetáciou zväzu *Ranunculion fluitantis* a *Callitricho-Batrachion* (3260), Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo

ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition* (3150) a druhov európskeho významu: zeler plazivý *(Apium repens),* modráčik krvavcový *(Maculinea teleius),* ohniváčik veľký *(Lycaena dispar),* potápnik *(Graphoderus bilineatus),* hnedáčik chrastavcový *(Euphydryas aurinia),* priadkovec trnkový *(Eriogaster catax),* očkáň rašelinový *(Coenonympha oedippus),* bystruška potočná *(Carabus variolosus),* kováčik fialový *(Limoniscus violaceus),* roháč obyčajný *(Lucanus cervus),* babôčka *(Nymphalis vaualbum),* mlynárik východný *(Leptidea morsei),* vážka *(Leucorrhinia pectoralis), Dioszeghyana schmidtii, Bolbelasmus unicornis,* hlaváč bieloplutvý *(Cottus gobio),* kolok vretenovitý *(Zingel streber),* hrebenačka vysoká *(Gymnocephalus baloni),* býčko *(Proterorhinus marmoratus),* pĺž zlatistý *(Sabanejewia aurata),* lopatka dúhová *(Rhodeus sericeus amarus),* hrúz Kesslerov *(Gobio kessleri),* hrúz bieloplutvý *(Gobio albipinnatus),* mlok dunajský *(Triturus dobrogicus),* kunka červenobruchá *(Bombina bombina),* podkovár malý *(Rhinolophus hipposideros),* netopier obyčajný *(Myotis myotis),* netopier pobrežný *(Myotis dasycneme),* bobor vodný *(Castor fiber)* a uchaňa čierna *(Barbastella barbastellus).*

Územie je pokryté hodnotnými porastmi vŕbovo-topoľových a dubovo-brestovo-jaseňových lužných lesov s výskytom mnohých starých stromov jedinečnej ekologickej hodnoty. Lesné hospodárstvo sa tu realizovalo len v obmedzenej miere. Okrem samotných lužných lesov tu nájdeme aj pozostatky lesostepí či významné rastlinné spoločenstvá stojatých vôd a vodných tokov.

III.4. Biotopy európskeho významu a druhy európskeho významu vrátane vtákov a ich biotopov, ktoré sú predmetom ochrany a prioritné biotopy európskeho významu, ktoré budú negatívne ovplyvnené

(uvedie sa napríklad ich reprezentatívnosť, prípadne ich stav ochrany podľa § 65 ods. 1 písm. o) zákona, stupeň izolácie a ich úlohy a funkcie v rámci danej lokality)

Dotknuté predmety ochrany, na ktoré bol, v rámci primareného posúdenia podľa ustanovení článkov 6 (3) a 6 (4) smernice rady 92/43/EHS o ochrane biotopov, voľne žijúcich živočichov a voľne rastúcích rastlin, preukázaný významne negatívny vplyv, sú z výššie menovaných druhov tri druhy vtákov. A to **haja tmavá (*Milvus migrans*)**, **orliak morsky (*Heliaeetus albicilla*)** a **bocian čierný (*Ciconia nigra*)**, ktoré sú prementom ochrany CHVÚ Dunajské luhy (SKCHVU007).

Haja tmavá *(Milvus migrans)*

Na Slovensku obýva predovšetkým pahorkatiny, široké údolia medzi pohoriami, ale aj lužné lesy a nižšie pohoria. Obľubuje lesnatú krajinu prestúpenú voľnými plochami (polia, lúky), takmer vždy v blízkosti vôd, veľkých riek alebo vodných nádrží.

Európske haje tmavé sú prelietavé až sťahovavé. Zriedkavo môžu prezimovať v blízkosti hniezdiska, prípadne tiahnuť len do južnej Európy. Väčšinou však zimujú v rovníkovej až južnej Afrike. Výrazné ťahové cesty sú Gibraltar a Blízky východ. Len málo vtákov tiahne cez Taliansko. Na zimoviská odlietajú skoro, zväčša už v druhej polovici augusta, vracajú sa v prvej polovici apríla.

Na Slovensku i v celej Európe hniezdi jednotlivo, výnimočne semikoloniálne. Často hniezdi v kolóniách iných vtákov, alebo v ich blízkosti - volaviek popolavých, bocianov bielych. Páry sú asi trvalé a na hniezdiská priletujú oba vtáky spolu. Po prílete predvádzajú svadobné lety. Ich súčasťou je, že sa vtáky vysoko vo vzduchu zachytávajú pazúrmi a padajú spolu takmer až k zemi, pričom sa okolo seba otáčajú. Hniezda si stavajú na stromoch. Často používajú staré hniezda iných vtákov volaviek, kormoránov, vrán, bocianov a podobne. Vo výstelke hniezd sa okrem rastlinného materiálu často objavujú aj kusy papiera, handier, umelých hmôt, špagáty a podobne. Vajíčka začínajú znášať koncom apríla, začiatkom mája. Ich počet je 2-3 a znášané sú v intervale 2-3 dní. Inkubácia začína pred znesením posledného vajca. Na sedení sa podieľajú obaja rodičia, samica viac. Zahrievanie trvá 28-32 dní. Počas sedenia nosí samec samici potravu. Najslabšie mláďa býva staršími potlačované a niekedy hynie. Na hniezde zostávajú 42-46 dní. U nás vyletujú zväčša v priebehu júla. Pohlavnú dospelosť dosahujú vo veku najmenej 2 roky. S rodičmi sa môžu zdržovať v hniezdnom teritóriu aj ďalší rok, pričom nie sú odháňané.

Haja tmavá sa živí rôznou potravou. V blízkosti vôd prevažujú v potrave ryby. Inde môžu prevažovať cicavce, najmä drobné hlodavce, alebo vtáky. Menej loví aj obojživelníky, najmä žaby a plazy. Vysoký podiel môže tvoriť hmyz. Je o nej dobre známe, že často okráda o potravu iné druhy vtákov, najmä dravce. Často zbiera živočíchy zrazené na cestách. Tam, kde žije v mestách, alebo v ich blízkosti, živí sa zväčša odpadkami. Veľmi často požiera zdochliny. Potravu môžu zbierať aj za letu z vodnej hladiny.

Dotknuté územie využíva časť jeho hniezdnej populácie Slovenska, ktorá okrem iného využíva aj lužné lesy riek Moravy a Latorice, Borskú nížinu, Podunajskú a Východoslovenskú rovinu. Potravné teritórium môže byť podľa miestnych podmienok pomerne veľké, od hniezda až päť kilometrov aj viac. Početnosť hniezdnej populácie v rámci celej SR sa v roku 1999 odhadovala na 40 – 60 párov, dlhodobý populačný trend ukazuje jej výrazný pokles.

V časti CHVÚ dotknutom výstavbou diaľnice D4 hniezdilo v minulosti (1970 - 1990) každoročne viacero párov, v 90. rokoch 20. storočia ich počet poklesol, hniezdenie však ešte bolo pravidelné (1-3 páry). V súčasnosti hniezdi už len nepravidelne, vyskytuje sa však každoročne. Ústup počtu hniezdiacich párov bol veľmi výrazný na celom našom úseku Dunaja (napr. v roku 2009 v celom CHVÚ iba 2 páry, v roku 2011 už žiadny pár v celom

CHVÚ), resp. na celom Slovensku a haja tmavá patrí medzi naše najohrozenejšie druhy vtákov.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - nepriaznivý (U2).

Úloha a funkcia v rámci danej lokality – predátor.

Orliak morský (Haliaeetus albicilla)

U nás žije v blízkosti veľkých riek a vodných nádrží, s dostatkom rýb a vodných vtákov. V blízkosti musia byť staré lesy s veľkými stromami.

Dospelé vtáky zo stredoeurópskej oblasti sú väčšinou stále a zimu trávia v blízkosti hniezdiska. Mladé vtáky sú potulné až sťahovavé a zimujú v západnej, alebo južnej Európe. Severské vtáky sú sťahovavé a môžu u nás zimovať.

Páry orliakov sú stále po mnoho rokov a väčšinou sa rozpadajú len po smrti niektorého z partnerov. Hniezdi pomerne skoro, zásnubné lety a stavba hniezda začínajú už koncom decembra. Súčasťou svadobných letov je chytanie sa pazúrmi vo vzduchu, sprevádzané hlasným volaním. Hniezdi na vysokých mohutných stromoch, najčastejšie na topoľoch, bukoch a boroviciach. Na hniezdo musí byť dobrý prílet. Počas hniezdenia je citlivý na vyrušovanie. Hniezdo je veľmi veľké. Väčšinou má pár v teritóriu niekoľko hniezd, ktoré striedavo používa. 1-3 vajíčka znáša samica už v druhej polovici februára, alebo začiatkom marca. Inkubácia trvá 36-40 dní. Sedí hlavne samica, na krátko striedaná samcom. Hniezdna starostlivosť trvá 80-90 dní. Ešte aspoň dva mesiace po vyletení sú mláďatá potravne plne závislé na rodičoch, ktorí ich kŕmia. Pohlavnú dospelosť dosahuje až približne vo veku 5 rokov.

Potravná skladba orliaka je pestrá. Najväčšiu časť jeho potravy tvoria ryby, nasledované malými až stredne veľkými cicavcami a najrozličnejšími druhmi vtákov. Často požiera aj zdochliny, najmä v zime.

Orliak hniezdil na slovenskej strane Dunaja do polovice 60-tych rokov. Jeho vymiznutie na Slovensku po tomto období súvisí s celkovým poklesom európskej populácie v 60-tych a 70-tych rokoch, ako dôsledok prílišnej chemizácie prostredia, ale aj ako dôsledok priameho prenasledovania človekom - odstrely, zber vajíčok, chytanie do klepcov, sokoliarstvo. Od 80-tych rokoch sa začala populácia zväčšovať a čoraz častejšie sa objavovali orliaky aj u nás, predovšetkým v zimnom období. Prvé dva páry zahniezdili na našom území opäť po viac než 30 rokoch v roku 1998.

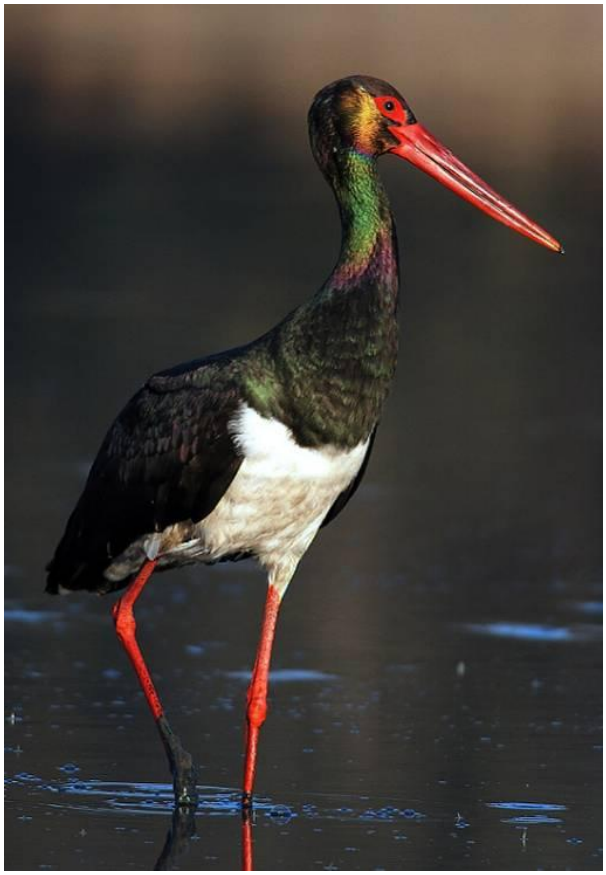
Okrem Dunaja hniezdi pri Morave a pri Zemplínskej Šírave, pri Latorici vo všetkých prípadoch na stromoch v počte asi 6 párov. Stálym zimoviskom orliaka je územie v úseku riek Dunaj a Morava v hraničných oblastiach s Maďarskom, Rakúskom a Českou republikou. Zimuje na Váhu, Hrone a ďalších vodných tokoch, ktoré v zime nezamŕzajú. Početnosť zimujúcej populácie je podstatne vyššia ako hniezdna populácia, odhaduje sa, že u nás zimuje okolo 60 - 80 jedincov.

Súčasná populácia orliaka morského v CHVÚ Dunajské luhy sú 4 páry (2006-2011). Ide o najväčšie hniezdisko druhu na Slovensku a hniezdi tu väčšina slovenskej populácie orliaka (Bohuš et al. 2009). V území priamo dotknutom výstavbou diaľnice D4 hniezdi momentálne (2009 - 2011) jeden pár.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - priaznivý (FV).

Úloha a funkcia v rámci danej lokality – predátor.

Bocian čierny (Ciconia nigra)



Sťahovavý druh, prilieta v marci až apríli, odlieta v auguste, alebo až v septembri. Obýva lesy, rovnako lužné ako listnaté, zmiešané či ihličnaté, od nížin do výšky asi 1000 m n. m. Obdobie rozmnožovania je od apríla do augusta.

Bociany čierne hniezdia samotársky. Hniezdo z konárov a vetvičiek je ukryté v korunách vysokých stromov, najmä listnatých, alebo postavené na neprístupných skalách. Obsadzujú aj staré hniezda veľkých dravých vtákov. Vo svojom teritóriu má pár niekoľko hniezd, ktoré počas rokov strieda. Hniezdo býva vo vrcholci suchého stromu, ale môže hniezdiť aj v strednej časti koruny pri kmeni, ak je dostatočný priestor pre prílety a odlety z boku. Plytké hniezdo je postavené z hrubých a suchých konárov uložených vo viacerých vrstvách. Býva naozaj veľké, pretože bociany čierne sa každý rok vracajú na to isté miesto a hniezdo stále opravujú a pristavujú. V strednej časti sú spevnené mačinou a pýrom. Horná časť je postavená z tenších konárikov a vystlaná machom, suchou trávou, niekedy lístím a srsťou. V kotlinke hniezda možno niekedy nájsť papier, handry, či zemiakovú vňať. Od hniezd iných veľkých vtákov sa odlišuje podľa vrstevnatosti uvedených materiálov.

Loví ryby do veľkosti 25 cm, okrem nich aj vodný hmyz, žaby a mloky. V oblastiach s vlhkými lúkami sa živí prevažne koníkmi, okrem toho žabami, hlodavcami a mláďatami vtákov. Potravu získava do vzdialenosti 10 km od hniezda. Z nestráviteľných častí potravy sa bocianom v žalúdku tvoria chuchvalce, tzv. vývržky, ktoré vydávia podobne ako sovy a dravce.

Na Slovensku žije v súčasnosti približne 400 až 600 párov tohto druhu. K najdôležitejším negatívnym vplyvom na tento druh u nás možno podobne ako pri predchádzajúcom druhu považovať exploatáciu nielen lužných lesov a ich okolia, ktorú zapríčiňuje lesné hospodárstvo, športové a rekreačné využívanie krajiny.

V rámci celého Slovenska sa bocian čierny vyskytuje v lete takmer na celom území, mimo severnej a západnej časti podunajskej nížiny.

V časti CHVÚ dotknutom výstavbou diaľnice D4 hniezdil v nedávnej minulosti 1 pár do roku 1995. V súčasnosti je hniezdna populácia v celom CHVÚ na historickom minime, v roku 2009 bolo zistené hniezdenie iba jedného páru. Napriek tomu sa bocian čierny vyskytuje v CHVÚ každoročne, vrátane oblasti ovplyvnenej navrhovanou činnosťou.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - priaznivý (FV).

Úloha a funkcia v rámci danej lokality – predátor.

III.5. Spoločenská hodnota biotopov a druhov negatívne ovplyvnených plánom/projektom

Výstavbou a prevádzkou diaľnice D4 Bratislava, Jarovce – Ivanka sever budú významne negatívne ovplyvnené tri druhy vtákov (pozri tabuľku nižšie). Ich spoločenská hodnota je stanovená vo vyhláške č. 158/2014 Z.z., ktorou sa mení a dopĺňa vyhláška Ministerstva životného prostredia Slovenskej republiky č. 24/2003 Z.z., ktorou sa vykonáva zákon č. 543/2002Z.z. o ochrane prírody a krajiny v znení neskorších predpisov.

Tab. 4: *Spoločenská hodnota významne negatívne ovplyvnených*

Negatívne ovplyvnené druhy	Spoločenská hodnota jedinca
Haja tmavá *(Milvus migrans)*	4 610,00 €
Orliak morský *(Haliaeetus albicilla)*	5 990,00 €
Bocian čierny *(Ciconia nigra)*	3 220,00 €

III.6. Význam lokality pre biotopy a druhy podľa bodu 4, ktoré budú ovplyvnené

(uvedie sa napríklad úloha lokalít v rámci Slovenskej republiky, biogeografického regiónu a území sústavy chránených území)

Diaľnica D4 Bratislava, Jarovce – Ivanka sever prechádza cez CHVÚ v jej severnej časti, konkrétne v hornej časti Hrušovskej zdrže, v ktorej nie je trvalo zaplavená celá inundačná časť. Trvale zvýšený stav hladiny je v tejto časti iba v hlavnom koryte Dunaja a v jeho ramenách. V zaplavovanej časti sa nachádzajú porasty mäkkého a tvrdého lužného lesa, príp. nížinné kosené lúky.

Kompaktná časť lesných porastov lužného lesa na ľavom brehu Dunaja v širšom okolí zámeru diaľnice je relatívne málo atakovaná ľudskými aktivitami. Svojou rozlohou a druhovým zložením sú tieto lesné celky vhodným útočiskom (hlavne **hniezdnym biotopom**) pre plaché druhy vtákov (**bocian čierny, haja tmavá, orliak morský**), ktoré sú predmetom ochrany CHVÚ Dunajské luhy.

Bocian čierny (*Ciconia nigra*)

Obýva lesy v rámci CHVÚ, ktoré využíva na hniezdenie. Potravu si hľadá na okrajoch vodných plôch alebo vodných tokov, pokiaľ možno, kryté vegetáciou. Loví ryby do veľkosti 25 cm, okrem nich aj vodný hmyz, žaby a mloky. V častiach CHVÚ s vlhkými lúkami loví aj koníky, okrem toho žaby, hlodavce či mláďaťa vtákov. Potravu získava do vzdialenosti 10 km od hniezda. Vyhľadáva pokojné a skryté miesta, ľudským sídlam sa vyhýba. Hniezdi jednotlivo na stromoch.

Haja tmavá (*Milvus migrans*)

Kompaktný porast lužného lesa v dotknutom území je veľmi vhodný pre jeho výskyt a hniezdenie. Potravné teritórium môže byť podľa miestnych podmienok pomerne veľké, od hniezda až päť kilometrov aj viac.

Z tohto pohľadu zostáva teda dotknuté územie naďalej významnou lokalitou druhu a dá sa predpokladať, že keď podunajská populácia začne znovu narastať, bude obsadzovať bývalé teritóriá v dotknutom území.

Orliak morsky (*Haliaeethus albicilla*)

Blízkosť veľké rieky a vodných nádrží, s dostatkom rýb a vodných vtákov v dotknutom území, tvoria jeho potravinovú základňu. Existencia starých lesov s veľkými stromami je vhodná pre jeho hniezdenie.

Ďalej je územie okolo Dunaja stálym zimoviskom.

Vzhľadom k vyššie uvedenému a k tomu, že v CHVÚ Dunajské luhy hniezdia 4 páry orliaka morského (ide tak o najväčšie hniezdisko druhu na Slovensku), má dotknuté územie pre druh veľký význam.

III.7. Opis očakávaných negatívnych účinkov, opis ich rozsahu, významu, veľkosti a ich lokalizácia

Opis očakávaných negatívnych účinkov (strata, poškodenie, rušenie, priame a nepriame účinky atď.), opis ich rozsahu (rozloha biotopov a počet druhov alebo oblastí výskytu ovplyvnených projektom), významu a veľkosti (napríklad ovplyvnená oblasť alebo populácia vo vzťahu k celkovej ploche a populácii danej lokality, resp. celej krajiny) a ich lokalizácia (vrátane máp)

Proces posudzovania vplyvov na životné prostredie preukázal, že stavba bude mat významný negatívny vplyv na predmety ochrany CHVÚ Dunajské luhy a to na druhy vtákov: **haje tmavej (*Milvus migrans*), orliaka morskeho (*Haliaeetus albicilla*) a bociana čierneho (*Ciconia nigra*)** a to ako v období realizácie, tak prevádzky. Tieto predmety ochrany budú ovplyvňované najmä vplyvmi: záber (priamy zásah do biotopov), hlukové a svetelné rušenie, zvýšená návštevnosť lokality po ľavobrežnej cyklotrase v lužných lesoch (rušenie), strety s vozidlami a znečistenie prostredia (zmeny imisných charakteristík, znečistenie vodného prostredia).

Záber

Záber predstavuje priamy zásah do biotopov. Stavba prechádza cez CHVÚ v jej severnej časti, konkrétne v hornej časti Hrušovskej zdrže. Približný trvalý záber činí 11,13 ha, čo je 0,067 % z celkovej rozlohy CHVÚ. Celkovo sa v celom zábere jedná o biotopy vhodné pre výskyt alebo hniezdenie niektorého druhov z predmetu ochrany. Väčšina predmetov ochrany využíva toto územie ako *potravné teritória či zhromaždiská* (migrujúce a zimujúce druhy). Podľa ornitologického prieskumu (Kúdela et al., 2011) v zámeru stavby pravidelne hniezdil pravdepodobne 1 pár bociana čierneho do roku 1995, v súčasnosti je hniezdna populácia na minime (1 hniezdiaci pár v CHVÚ), avšak v posledných rokoch zrejme dochádza k

zvyšovaniu stavov. V tom prípade by pravdepodobne došlo k opätovnému osídleniu tejto oblasti. Hniezdiská tohto druhu sú pomerne vzácne a vyžadujú preto prísnu ochranu.

V minulosti bola časť CHVÚ v okolí zámeru pravidelným hniezdiskom druhu haja tmavá V súčasnosti hniezde len nepravidelne, vyskytuje sa ale každoročne. Pretože úbytok druhu nastal na celom území SR, zostáva z celoštátneho pohľadu toto územie naďalej významnou lokalitou druhu a dá sa predpokladať, že pokiaľ dunajská populácia začne znova narastať, budú obsadzované bývalé teritóriá v území dotknutom stavbou (Kúdela, Melišková, Littera, 2011).

Súčasné hniezdne populácie druhu orliaka morského v CHVÚ činia 4 páry (2006 – 2011). Je to najväčšie hniezdisko druhu na Slovensku. V území priamo dotknutom výstavbou zámeru hniezdi 1 pár, čo je teda ¼ celkovej populácie v CHVÚ.

Z údajov uvedených vyššie, je zrejmé, že hniezdiská týchto druhov sú veľmi vzácne a vyžadujú preto prísnu ochranu. Likvidácia biotopov v priestore zámeru bola preto pre tieto druhy vyhodnotené (aj napriek relatívne malému percentu záberu v rámci CHVÚ) ako významne negatívne.

Hlukové a svetelné rušenie

Podľa Rejnen a kol. (1995) je hluková hladina pri ktorej živočíchy opúšťajú svoje habitáty z dôvodu nadmerného rušenia rôzna pri rôznych vtáčích druhoch, priemer sa však pohybuje medzi 40 – 50 dB, a to pre lesné druhy vtákov, ako aj pre vtáky otvorených stanovíšť. Preto sú ako relevantné (pre určenie významne ovplyvneného územia) brané do úvahy tieto hodnoty.

Pokiaľ spočítame plochu významne zasiahnutú nárastom hluku pri prevádzke zámeru, dostaneme číslo 336,9 ha (noc), resp. 276,6 ha (deň), čo činí 2,04 % (noc), resp. 1,68 % (deň) z celkovej rozlohy CHVÚ. Tieto percentá sú platné pre druhy haja tmavá a orliak morský, ktoré využívajú všetky zasiahnuté biotopy (napr. hniezdiska, potravné biotopy), teda lesné biotopy v Biskupických luhoch i vodné plochy a inundáciu Dunaja.

Pri druhoch využívajúcich hlavne lesné porasty Biskupických luhov, zasiahne významná miera rušenia cca 143,9 ha, tj. približne 1,7 % tohto typu prostredia v rámci CHVÚ. Jedná sa hlavne o bociana čierneho.

Z čísel, ktoré sú uvedené vyššie je možné vyvodiť závery, ktoré hovoria, že vplyvom hlukového a svetelného rušenia hlavne z prevádzky zámeru budú významne negatívne ovplyvnené menované tri vtáčie druhy.

Zvýšená návštěvnost lokality

Súčasťou zámeru je prepojenie ľavobrežnej a pravobrežnej cyklotrasy pomocou mostov na D4, odkiaľ sa bude oddeľovať pruh pre chodcov a cyklistov. Existujú preto obavy, že výrazne stúpne návštevnosť ľavého brehu (ktorý je v súčasnosti dostupný iba obtiažne), čo so sebou prinesie rušenie nielen v pobrežnej časti, ale v oblasti lužných lesov, ktoré ponúkajú útočisko druhom citlivým na rušenie ako sú bocian čierny, orliak morský a haja tmavá. S vplyvom zvýšenej návštevnosti dotknutej lokality existuje riziko, že tieto citlivé druhy budú vytlačené s nimi dosiaľ obývaných biotopov.

Zvýšenú návštevnosť a stým spojený nárast vyrušovania turistami možno očakávať v okolí jestvujúcich (cyklotrasa na ľavostrannej hrádzi pozdĺž ľavostranného priesakového kanála) či novopostavených cyklotrás na ľavom brehu Dunaja (cyklotrasa v súbehu s diaľnicou D4), čo môže zvýšiť tlak na citlivé druhy vtákov.

Zvýšená návštevnosť lokality Biskupických luhov neprispeje k zlepšeniu ekologických podmienok pre citlivé vtáčie druhy, je rozhodne vnímaná ako negatívum, no nie je ju možné klasifikovať ako významne negatívny vplyv.

Ďalšie vplyvy čo sa budú prejavovať hlavne v období prevádzky sú **strety s vozidlami** a **znečistenie prostredia**. Tieto vplyvy boli vyhodnotené ako mierne negatívne.

III.8. Možné kumulatívne dosahy a iné dosahy, ku ktorým by mohlo dôjsť v dôsledku kombinovaných opatrení posudzovaného plánu alebo projektu a iných plánov alebo projektov

Na posúdenie kumulatívnych vplyvov boli využité najmä aktuálny Územný plán veľkého územného celku Bratislavský kraj, Územný plán hlavného mesta SR Bratislava a ďalej Informačný systém SEA/EIA.

Posudzovaný zámer sa nachádza v širšom okolí hlavného mesta Bratislavy, ktoré je vystavené pomerne silným tlakom na využitie územia.

Z jestvujúcich stavieb, ktoré sa výrazne podieľajú na kumulatívnych vplyvoch, sa jedná o:

Diaľnica D1 Bratislava – Trnava, 6-pruh – súčasná diaľnica sa bude križiť s diaľnicou D4 v križovatke Ivanka sever.

Diaľnica D2 – trasa: štátna hranica CZ/SK (Lanžhot – Brodské) – Malacky – Bratislava – štátna hranica SK/HU (Čunovo – Rajka), 4-pruh. Súčasná diaľnica D2 sa bude križiť s tu hodnoteným úsekom diaľnice D4 v mimoúrovňovej križovatke BA, Jarovce.

Diaľnica D4, štátna hranica AT/SK (Jarovce) – Bratislava, Jarovce (križovatka s D2), 4-pruh – tu hodnotený úsek predstavuje predlženie D4 v mimoúrovňovej križovatke Jarovce.

Ako verejnoprospešné stavby sú v záväznej časti VÚC Bratislavského kraja uvedené:

Diaľnica D4, Ivanka sever – Rača – stavba nadväzujúca na tu posudzovaný úsek Diaľnice D4. Spoločne s ďalšími úsekmi diaľnice D4 budú tvoriť obchvat Bratislavy.

Rýchlostná cesta R1, Most pri Bratislave – Vlčkovce – stavba nadväzujúca na tu posudzovaný úsek Diaľnice D4 v križovatke Podunajské Biskupice. Tento úsek vedie paralelne (cca 10 km) juhovýchodne s existujúcou Diaľnicou D1 v smere na Trnavu.

Rýchlostná cesta R7, BA Prievoz – BA Ketelec – stavba nadväzujúca na tu posudzovaný úsek diaľnice D4 v križovatke Ketelec. Predpokladá sa realizácia súčasne s diaľnicou D4 v tu posudzovanom úseku (2016 - 2019).

Rýchlostná cesta R7, BA Ketelec – Dunajská Lužná - jedná sa o pokračovanie rýchlostnej cesty z MÚK Ketelec smerom na východ. R7 pokračuje pozdĺž Dunaja na Dunajskú Stredu – Nové Zámky – Veľký Krtíš. Pri Lučenci sa bude pripájať na plánovanú R2 do Košíc.

Trasa vysokorýchlostnej trate (VRT) v hraniciach mesta Bratislavy od ústrednej nákladnej stanice pozdĺž diaľnice D1 po odbočku Čierna voda a ďalej pozdĺž diaľnice D1 smerom na Považie.

Plochy pre výstavbu paralelnej vzletovej a pristávacej dráhy s jestvujúcou vzletovou a pristávacou dráhou 13–31 a plochy pre vybudovanie potrebnej infraštruktúry vybavovacieho procesu na letisku M. R. Štefánika. Plochy tesne susedia s navrhovaným zámerom, nachádzajú sa západne od nich.

Územie a zariadenia Vodného diela Wolfsthal. Toto vodné dielo by malo byť situované cca 11,5 km proti prúdu Dunaja od tu posudzovaných území sústavy Natura 2000. Znamenalo by ovplyvnenie hladiny vody v priestore pod stupňom, ovplyvnenie biotopov v tu posudzovanom území nemožno vylúčiť.

Ropovod a produktovody Schwechat – Slovnaft. Spojenie Slovnaftu s Rakúskom. Koridor stanovený v ÚP Bratislavy vedie cez územie sústavy Natura 2000 (CHVÚ Dunajské luhy a ÚEV Biskupické luhy – severne od ostrova Kopáč).

Vysokotlakový plynovod Slovnaft-Petržalka-Einšteinova-Mlynská dolina. Trasa povedie cez CHVÚ Dunajské luhy a ÚEV Biskupické luhy – severne od ostrova Kopáč.

Prístaviská, prístavné hrany a súvisiace stavby dopravnej a technickej infraštruktúry prístavísk vodnej dopravy na Dunaji

Ďalej je navrhnutá rozvojová funkčná plocha v priestore veslárskeho kanála pri Jaroveckom ramene a tiež pomerne rozsiahla rozvojová funkčná plocha severovýchodne od MÚK Jarovce. Priemyslová plocha v návrhu je umiestnená severne od existujúcej komunikácie E58 medzi MÚK Jarovce a štátnu hranicu SR/A.

Z vyššie uvedeného početného zoznamu plánovaných zámerov je zrejmé, že okolie posudzovaného zámeru je pod výrazným tlakom rozvojových aktivít.

Jedná sa najmä o stavby už existujúcej dopravnej infraštruktúry a priemyselných aktivít, ktoré predstavujú pomerne hustú sieť v tomto komplikovanom území. Pokiaľ k týmto existujúcim zámerom pridáme ešte plánované stavby infraštruktúry (pozri vyššie), rozvojové plochy bývania a priemyslové areály, je zrejmé, že by ľahko mohlo dôjsť k prekročeniu únosnej miery prostredia pre udržanie predmetov jednotlivých lokalít sústavy Natura 2000 v stave priaznivom z hľadiska ochrany.

V prípade CHVÚ Dunajské luhy bola už tato kapacita prostredia prekročená, a to pri tu posudzovanom zámere. V súvislosti s CHVÚ Dunajské luhy a ÚEV Biskupické luhy sú pritom plánované ďalšie zámery líniových stavieb (Ropovod a produktovody Schwechat – Slovnaft a Vysokotlakový plynovod Slovnaft-Petržalka-Einšteinova-Mlynská dolina), ktoré pretnú ľavobrežné Dunajské lužné lesy v severnej časti a budú predstavovať ďalšiu stratu cenných biotopov. Plánovaná rýchlostná cesta R7 potom bude oddeľovať tieto lokality východne od Kopáčskeho ostrova (napojenie na MÚK Ketelec). Okrem nárastu hlukového rušenia a záberu biotopov prinesie i zhoršenie migračnej priestupnosti územia.

Všeobecne najväčším problémom bude vysoká priestorová fragmentácia územia a záber cenných biotopov spolu s výrazným nárastom hlukového znečistenia pri niektorých typov stavieb.

III.9. Zmierňujúce opatrenia v rámci projektu

(uvedie sa ako sa budú realizovať a akým spôsobom zamedzia negatívnym dosahom na lokalitu alebo tieto dosahy znížia)

Fáza projektovej prípravy:

- Cestná kanalizácia je navrhnutá v dostatočnej kapacite, aby nebezpečné látky pochádzajúce z dopravy (ropné látky, oter z pneumatík, oter z brzd a pod.) boli vždy zachytené. Správca komunikácie bude tieto bezpečnostné prvky pre ochranu vôd pravidelne kontrolovať, čistiť a udržovať v plne funkčnom stave.

Opatrenie bude realizované počas výstavby a prevádzky (kontrola) a zamedzí kontaminácii povrchových a podzemných vôd v území.

- Odvodnenie mostných konštrukcií (Dunaj, Malý Dunaj a ostatné toky) bude riešené kanalizáciou s navedením k dostatočne dimenzovaným bezpečnostným prvkom pre ochranu vôd, tak ako sú riešené v DÚR.

Opatrenie bude realizované počas výstavby a prevádzky (kontrola) a zamedzí kontaminácii povrchových a podzemných vôd v území.

- Pri mostných konštrukciách vedených cez lokality sústavy Natura 2000 budú použité tiché dilatačné závery, ktoré znížia hluk v priestore pod mostom.

Opatrenie zníži hlukové zaťaženie okolitého prostredia v maximálnej miere, čím sa zmenší rozsah dotknutých lokalít sústavy Natura 2000.

- Pri mostných konštrukciách vedených cez lokality sústavy Natura 2000 budú po oboch stranách nainštalované 4 m vysoké protihlukové steny.

Opatrenie zníži hlukové zaťaženie okolitého prostredia v maximálnej miere, čím sa zmenší rozsah dotknutých lokalít sústavy Natura 2000.

Fáza realizácie:

- Dodržanie podmienok uvedených v stavebnom povolení pre zámer bude pravidelne kontrolovať ekodozor stavby.

Opatrenie zamedzí nežiaducim vplyvom mimo záber stavby a zabezpečí splnenie ostatných zmierňujúcich opatrení, ktoré sú navrhnuté.

- Rúbanie stromov v priestore záberu stavby sa bude realizovať v období mimo hniezdenia vtákov.

Opatrenie má zamedziť ohrozeniu reprodukčného cyklu vtáčích druhov až po obdobie vyvedenia mláďat.

- V blízkosti Biskupického ramena (cca km 4,590 – 4,720 zámeru) sa bude skrývka zeminy realizovať mimo obdobie rozmnožovania hraboša severského panónskeho (najlepšie v mesiacoch XII – I).

Opatrenie zamedzí narušeniu reprodukčného cyklu jedincov tohto chráneného druhu.

- Počas realizácie stavby bude potrebné okamžite zarovnávať terénne depresie, v ktorých by mohla stáť voda a mohli by sa tak stať biotopom pre rozmnožovanie obojživelníkov. V prípade nutnosti budú počas stavby nainštalované migračné bariéry na ochranu obojživelníkov.

Opatrenie má zamedziť úhynu obojživelníkov priamo na stavenisku.

- Výbavu stavebnej mechanizácie bude doplnená o havarijný balíček obsahujúci sorbent. Používať sa budú v maximálne možnej miere biodegradabilné (odbúrateľné v prírode) prevádzkové kvapaliny, mechanizáciu pracujúcu na stavbe bude nutné udržovať vo vyhovujúcom technickom stave (žiadne odkvapy).

Opatrenie má zamedziť znečisteniu pôdy a podzemnej vody a tak nepriamemu vplyvu na okolité biotopy.

- Stavebné dvory a depónie materiálu budú umiestnené mimo lokality sústavy Natura 2000.

Predíde sa tak možným rizikám kontaminácie územia priamo v rámci území Natura 2000.

Fáza prevádzky:

- Zástupcami ŠOP SR, príslušných samospráv a SVP, š.p. je potrebné znemožniť umiestňovanie nových stánkov s občerstvením pozdĺž celej ľavobrežnej cyklotrasy v priestore CHVÚ Dunajské luhy.

Cieľom opatrenia je minimalizovať vyrušovanie vtákov turistami a športovcami v dotknutých chránených územiach.

- Výstavbou sa nenaruší jestvujúci systém závor a zábran znemožňujúcich nepovolený vjazd do priestoru CHVÚ Dunajské luhy na oboch stranách Dunaja.

Opatrenie má za úlohu minimalizáciu rušenia zvýšenou návštevnosťou v CHVÚ Dunajské luhy.

- Priestor pod estakádou sa ponechá v čo najviac prírodnom stave (hlinené podložie, s kameňmi ostrovčekovite blízko seba s frakciou do 30 cm, ktoré budú zvyšovať variabilitu prostredia) s rešpektovaním potrieb a požiadaviek údržby mostného telesa.

Opatrenie zlepší migračnú priestupnosť územia pod budúcou estakádou hlavne pre plazy a drobné živočíchy.

- Pravidelnými kontrolami a likvidáciou sa bude brániť šíreniu inváznych druhov rastlín do oblastí, v ktorých bude odstránený vegetačný kryt počas stavby.

Opatrenie má zabrániť šíreniu inváznych rastlín, aby biotopy v okolí zámeru po navrátení do prírodne blízkeho stavu neboli znehodnotené.

IV. ALTERNATÍVNE RIEŠENIA

IV.1. Identifikácia a opis možných alternatívnych riešení vrátane nulovej možnosti

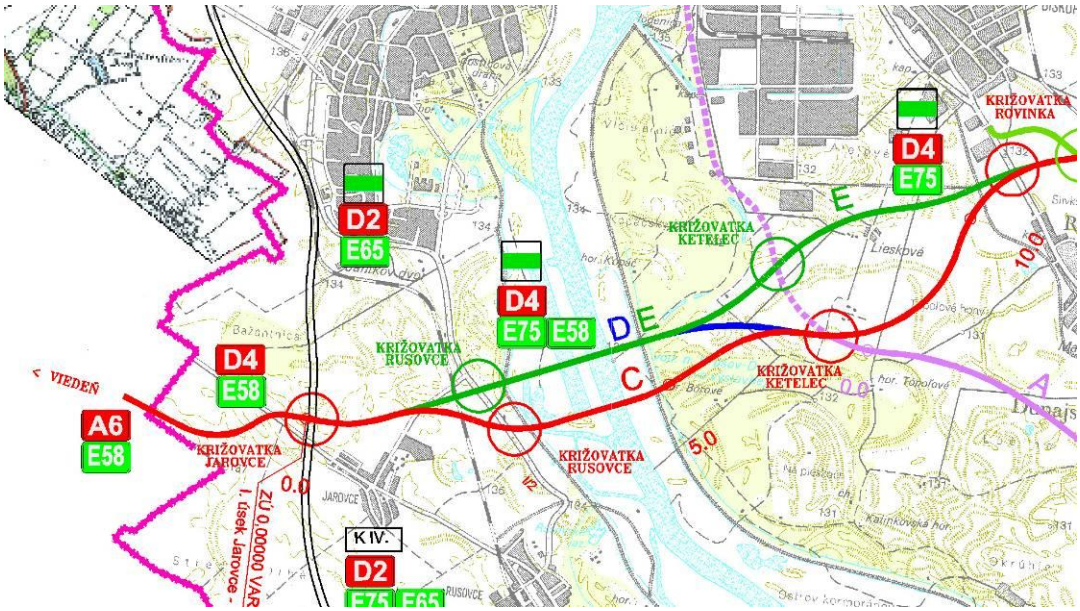
(spôsob identifikácie, postupy, metódy)

Umiestnenie predmetného úseku diaľnice D4 bolo predmetom viacerých štúdii, ktoré riešili jeho umiestnenie južne a juhovýchodne od hlavného mesta Bratislavy. Boli to štúdie:

- ***„Dopravno-urbanistická štúdia nultého okruhu okolo Bratislavy“,*** ďalej DUŠ (spracoval DOPRAVOPROJEKT, a.s. v 02.2002).
- ***„Diaľnica D4, križovatka Jarovce na D2 – križovatka Senec na D1“*** , TŠ (spracovala Alfa 04 a.s. v 06.2005)
- ***„Diaľnica D4, úsek Jarovce – Ivanka sever“ , optimalizácia umiestnenia križovatiek na D4,*** TŠ (spracoval Geoconsult,s.r.o., v 12.2007)
- ***„Štúdia realizovateľnosti a účelnosti pre ťah D4 Bratislava Jarovce – Ivanka sever – Stupava juh – št. hr. SR / RR***, (spracoval DOPRAVOPROJEKT, a.s. v 09.2009)

Na základe pripomienok vznesených pred a v rámci procesu EIA boli napokon optimalizované tri varianty diaľnice D4, ktoré sa odlišovali hlavne prechodom cez rieku Dunaj a prechodom cez chránené územie NATURA 2000 (km 0,000 – 11,000):

- variant „C“ (mostami nad riekou Dunaj) - červený
- variant „D“ (tunelom popod riekou Dunaj) - modrý
- variant „E“ (mostami nad riekou Dunaj) – zelený



VARIANT „C“ (ČERVENÝ)

Začiatok úseku je v MÚK „Jarovce“ kde sa diaľnica D4 napája na diaľnicu D2. Trasa pokračuje severne od MČ BA – Jarovce, mimoúrovňovo (mostom) križuje žel. trať Bratislava – Rusovce, cestu I/2, a pravostrannú hrádzu vodného diela Gabčíkovo, južným okrajom Jarovského ramena a plánovanej veslárskej dráhy, kolmo mostom ponad rieku Dunaj a jeho ľavostrannú hrádzu. Na pravom brehu Dunaja obchádza prírodnú rezerváciu (PR) Dunajské

ostrovy a chránené územie Natura 2000 (Ostrovné lúčky). Na ľavom brehu Dunaja prechádza estakádou cez PR Gajc (v jej najužšom mieste) a chránenú krajinnú oblasť (CHKO) Dunajské luhy, ktoré sú súčasťou chráneného územia Natura 2000 (Biskupické Luhy). Negatívne dopady prechodu diaľnice D4 cez toto územie bude eliminované vedením diaľnice D4 na estakáde až po km 5,545.

Most cez Dunaj je navrhnutý v kategórii D 33,5/120 (šesťpruh), ďalej so štvorpruhovým šírkovým usporiadaním so širším stredným deliacim pásom tak, aby bolo možné výhľadové rozšírenie diaľnice D4 na 6–pruh smerom k osi diaľnice D4 až po MÚK „Ivanka – západ“ (križovatka diaľnice D4 s cestou I/61). V rámci mostu cez Dunaj budú navrhnuté aj chodníky pre peších a pre cyklistov.

Na ľavom brehu Dunaja pokračuje diaľnica D4 južne od areálu ťažby štrkopieskov Ketelec, kde bude mimoúrovňovo križovať rýchlostnú cestu R7 a plánovanú mestskú zbernú komunikáciu od Prístavnej ulice, vedenej západne od Slovnaftu, a.s.. V km 9,250 D4 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“.

Trasa diaľnice D4 ďalej mimoúrovňovo križuje cestu I/63 medzi MČ BA - Podunajskými Biskupicami a obcou Rovinka (v MÚK „Rovinka“) a žel. trať Bratislava – Dunajská Streda. Pokračuje severne od obce Most pri Bratislave, kde v budúcnosti by mala mimoúrovňovo križovať novú, výhľadovú rýchlostnú cestu Bratislava – Vlčkovce (v zmysle zámerov NDS, a.s.) a cestu II/572. Prepojenie oboch ciest s diaľnicou D4 bude v jednej MÚK „Most pri Bratislave“ prostredníctvom kolektorových pásov.

Trasa diaľnice D4 ďalej pokračuje pred vzletovo-pristávacou dráhou VPD 13-31 Letiska M.R.Štefánika a mostom križuje rieku Malý Dunaj. V tomto úseku je diaľnica D4 vedená v zárezе tak, aby rešpektovala ochranné pásma predĺženej dráhy VPD 13-31 letiska. Diaľnica D4 ďalej prechádza mostom ponad budúcu vodnú plochu západného okraja ťažobného priestoru.

Ďalej je trasa D4 vedená východne od areálu bývalého poľnohospodárskeho družstva v lokalite Prucká sihoť (ďalej od letiska). V mieste križovania s plánovanou VPD 13L–31R letiska je diaľnica D4 vedená v zárezе cca 6,8 – 7,2 m pod úrovňou terénu tak, aby v budúcnosti (v rámci výstavby VPD 13L–31R) bolo možné dobudovať prekrytie diaľnice formou tunela „Zálesie“.

Trasa diaľnice D4 ďalej pokračuje v nízkom násype na pravom brehu, pozdĺž Šúrskeho kanála, pričom rešpektuje jeho ochranné pásma, mimoúrovňovo (mostom) križuje cestu I/61, výhľadovú komunikáciu medzi miestnou časťou Tanieriky a Sakoň, mimoúrovňovo križuje žel. trať Bratislava – Galanta a končí v mieste napojenia na diaľnicu D1 v MÚK „Ivanka – sever“. Celková dĺžka variantu „C“ je 22,801 km.

VARIANT „D“ (MODRÝ)

Začiatok úseku od MÚK „Jarovce“ po km 1,0 je riešený rovnako ako vo variante „C“, ďalej trasa diaľnice D4 mimoúrovňovo (podcestím) križuje žel. trať Bratislava – Rusovce, od MÚK „Rusovce“ pokračuje v priamke tunelom „Dunaj“ dĺžky 2,550 km popod Jarovské rameno a popod hlavným tokom rieky Dunaj, severnejšie ako pri variante „C“. Od MÚK „Ketelec“ v km 7,195 D4 (štvorlístková križovatka diaľnice D4 s rýchlostnou cestou R7 – alt. A, resp. trubkovitá križovatka pri R7 – alt. C,) pokračuje v trase podľa variantu „C“ až po MÚK „Ivanka – sever“ kde končí napojením na diaľnicu D1. Celková dĺžka variantu „D“ je 22,661 km.

Trasa tunela bude tvorená dvomi nezávislými trasami smerových pásov diaľnice, každý pre jednu tunelovú rúru. Smerovo je trasa vedená vzhľadom na charakter križovanej prekážky v priamej. Vzájomná vzdialenosť osí tunelových rúr je v hodnote dva priemery, t.j. 24 m.

Diaľnica D4 je v tuneli navrhnutá v kategórii 2T 8 (štvorpruh), ostané úseky mimo tunela sú riešené rovnako ako vo variante „C“. Pri tunelovom riešení prechodu diaľnice D4 cez rieku Dunaj nebudú v tomto koridore navrhnuté chodníky pre peších a trasy pre cyklistov (len únikové).

VARIANT „E“ (ZELENÝ)

Trasa diaľnice D4 je vedená v úseku od km 0,000 – 4,851 rovnako ako vo variante „D“, pričom križovanie so žel. traťou Bratislava – Rusovce je riešené nadcestím, trasa ďalej pokračuje mostom dĺžky 2,722 km ponad Jarovské rameno a hlavný tok rieky Dunaj. Od km 4,851 trasa pokračuje severne od plánovanej ťažby štrkopieskov „Ketelec“ a miestnu časť Lieskové. V km 8,700 D4 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“. Za MÚK „Rovinka“ (križovatka D4 s cestou I/63), od km 11,119 D4 pokračuje v trase podľa variantu „C“ až po MÚK „Ivanka – sever“.

Celková dĺžka variantu „E“ je 22,169 km.

VARIANT „NULOVÝ“

Variant nulový predstavuje stav, kedy všetku automobilovú dopravu bude musieť obslúžiť systém ciest a diaľnic v dotknutom území, pričom by sa plánovaná investícia nerealizovala a s narastajúcimi nárokmi dopravy by sa musela vysporiadať existujúca cestná sieť. Hlavnú dopravnú funkciu v súčasnosti plnia úseky diaľnice D1a D2 prechádzajúce zastavaným územím Bratislavy, tieto sú doplnené dotknutými cestami I., II. a III. triedy.
Z výsledkov kapacitného posúdenia vyplýva, že v časovom horizonte roku 2015 nebudú nárokom dopravného zaťaženia vyhovovať niektoré úseky diaľnice D1 vedené v zastavanom území Bratislavy, ktoré sú zaťažené najmä mestskou dopravou. Ďalej sú nevyhovujúce úseky ciest I. triedy – I/61 a I/63, ktoré už v súčasnosti majú prekročené prípustné intenzity dopravy a priamo ovplyvňujú dopravu na vybraných úsekoch v rámci nulového variantu.
V časových horizontoch 2020, 2030 a 2040 sa z dôvodu nárastu dopravy stanú nevyhovujúce ďalšie úseky diaľnice D1.

V Správe o hodnotení vplyvov diaľnice D4, Jarovce – Ivanka sever (vypracoval Geoconsult, s.r.o, Bratislava, 04/2010) **boli teda vyhodnotené varianty**:

- ***„C" červený*** – modifikácia variantov „A" a „B" uvedených v zámere
- ***„D“ modrý*** – tunelový variant pod riekou Dunaj
- ***„E" zelený*** – alternatívny návrh (estakáda) prechodu cez Duna) v trase tunelového variantu odporučený v Štúdii realizovateľnosti a účelnosti diaľnice D4
- ***Nulový variant***

IV.2. Vyhodnotenie zvažovaných alternatív a odôvodnenie zvolenej alternatívy

(dôvody, na základe ktorých a kto dospel k záveru, že neexistujú alternatívne riešenia)

Vyhodnotenie definitívne zvažovaných alternatív vedenia diaľnice D4 v tomto území prebehlo v rámci procesu EIA, resp. v Správe o hodnotení. Vyhodnotenie bolo zhrnuté v záverečnom stanovisku vydaného Ministerstvom životného prostredia SR pod číslom: 318/2010-3.4/ml dňa 28.9.2011.

Vplyvy jednotlivých variantov boli vyhodnotené z hľadiska ich významnosti a časového priebehu pôsobenia vychádzajúc z identifikácie vstupov a výstupov navrhovanej činnosti, pričom základným členením je ich významnosť pri modifikácii súčasného stavu životného prostredia či už v negatívnom, ale aj v pozitívnom smere a taktiež aj časové hľadisko ich pôsobenia. Hodnotenie bolo kvantifikované a výsledky boli zhrnuté v tabuľke podľa nasledujúcej stupnice.

stupeň 1 - vplyvy veľmi významné

stupeň 2 - vplyvy významné

stupeň 3 - vplyvy málo významné

stupeň 4 - vplyvy bez významu

Očakávané vplyvy z hľadiska časového pôsobenia možno rozčleniť nasledovne:

a - vplyvy počas výstavby

b - vplyvy počas prevádzky

c - vplyvy počas výstavby aj prevádzky

Pri hodnotení jednotlivých vplyvov z hľadiska ich významnosti sa zohľadňoval fakt, že dotknuté územie predstavuje silne antropogénne zmenenú poľnohospodársku krajinu v blízkosti aglomerácie hlavného mesta Bratislava, obci Most pri Bratislave a Ivanka pri Dunaji. Opak tvorí začiatok úseku, kde diaľnica prechádza chránenými územiami a územiami sústavy Natura 2000. V hodnotení sa neuvažovalo s havarijnými situáciami.

Tab. 5: Predpokladané vplyvy posudzovaných variantov v procese EIA

Zložka životného prostredia	**PREDPOKLADANÝ NEGATÍVNY VPLYV Z HĽADISKA VÝZNAMNOSTI A ČASOVÉHO**		
	VARIANT „D" modrý	**VARIANT „C" červený**	**VARIANT „E" zelený**
Horninové prostredie a reliéf	1a	4a	4a
Povrchové vody	2c	2c	2c
Podzemné vody	1a,2b	2c	2c
Pôdy	1a	1a	1a
Ovzdušie	3a, 4b	3a, 4b	3a, 4b
Biota a biotopy	2a, 3b	1a, 2b	1a, 2b
Chránené územia, Natura 2000, ÚSES	2a, 3b	1a, 2b	1a, 2b
Scenéria krajiny	4c	3c	3c
Kvalita života dotknutého obyvateľstva	2a, 3b	2a, 3b	2a, 3b
Územný rozvoj	4c	3c	3c
Infraštruktúra a doprava	2a	2a	2a
Zdravotné riziká obyvateľstva	2a, 4b	2a, 4b	2a, 4b

Vyhodnotenie zvažovaných alternatívnych riešení je možné popísať aj nasledovne.

Horninové prostredie a reliéf - variant „D" tunelový bude mať veľmi významný vplyv na horninové prostredie hlavne v úseku tunela vrátane výjazdových a vjazdových rámp, keďže bude prechádzať cez vysokopriepustné horizonty štrkov, kde môže dôjsť k znečisteniu prostredia a taktiež z hľadiska geotechnických rizík bude realizácia tunela so vstupnými a výstupnými rampami veľmi náročná na zabezpečenie stability horninového prostredia vzhľadom na jeho vysoké zvodnenie a nepriaznivé inžinierskogeologické vlastnosti (kvartérne aj neogénne sedimenty) pre razenie tunela.

V trase variantov „C" a „E" možno horninové prostredie a reliéf charakterizovať ako dobre únosné, bez významných geodynamických javov s priaznivými inžinierskogeologickými vlastnosťami. Vplyvy navrhovanou činnosťou sa hodnotia ako bezvýznamné a len počas výstavby.

Povrchové vody v území reprezentujú vodné toky Dunaj, Malý Dunaj a Šúrsky kanál,

Biskupické rameno, vodné toky kanálov vybudovaných v rámci VDG a vodné plochy štrkoviska Zelená voda. Povrchové vody sú veľmi zraniteľné (možné priame znečistenie) najmä počas výstavby.

Variant „D" je v úseku Dunaja vedený tunelom, navrhovaná technológia razenia tunela nepredpokladá možné ovplyvnenie kvality a režimu povrchových vôd v dotknutom území počas výstavby, priamo dotknutý však môže byť pravobrežný priesakový kanál, ktorý je v tesnej blízkosti navrhovaného západného portálu pre razenie.

V dotknutom území sú *podzemné vody* vzhľadom na vysokú priepustnosť prostredia veľmi zraniteľné. Vplyv vedenia diaľnice vzhľadom na jej pozíciu v CHVO Žitný ostrov považujeme za významný počas výstavby aj prevádzky, pričom pri variante „D" tunelovom je počas výstavby riziko ovplyvnenia podzemných vôd až veľmi významné.

Pôdy sú ovplyvnené najmä zábermi, čiže jedná sa o veľmi významný vplyv najmä počas výstavby.

Znečistenie *ovzdušia* je ovplyvnené celkovou kvalitou ovzdušia v území. Vzhľadom na to, že súčasná doprava bude prakticky len prerozdelená a bude sa úmerne zvyšovať aj keby sa D4 nerealizovala, zmení sa však len kumulácia znečistenia ovzdušia pri zlých rozptylových podmienkach a to však v otvorenej krajine mimo intravilán obcí, kde je aj podstatne lepšia vetrateľnosť. Vplyv považujeme za bezvýznamný počas prevádzky. Počas výstavby môže dôjsť ku kumulácii znečistenia ovzdušia pri stavebných dvoroch a na prístupových cestách ku stavenisku v čase nasadenia stavebných strojov a dopravných kapacít pri zemných prácach. Vplyv možno považovať za málo významný, bude však len dočasný.

Biota, biotopy, chránené územia, Natura 2000 a ÚSES - vo variante „D" je územie len čiastočne dotknuté zásahom do lesných porastov a ekologicky významných segmentov krajiny, pričom dôjde aj k lokálnemu výrubu stromov. Tento vplyv považujeme počas výstavby za významný, kedy dôjde k priamej likvidácii lesných porastov. Počas prevádzky vplyv variantu „D" bude z hľadiska stresových faktorov málo významný.

Vo variantoch „C" a „E" je územie z hľadiska vplyvov na faunu a flóru priamo dotknuté najmä zásahom do biotopov európskeho významu a ekologicky významných segmentov krajiny, pričom dôjde aj k značnému výrubu stromov. Tento vplyv považujeme počas výstavby za veľmi významný pri oboch variantoch, kedy dôjde k priamej likvidácii biotopov. Počas prevádzky vplyv oboch variantov možno považovať za významný vzhľadom na produkciu stresových faktorov (hluk, vibrácie).

Vplyvy na scenériu krajiny variantu „D" možno považovať za bezvýznamné počas výstavby aj prevádzky, vzhľadom na charakter súčasnej krajiny. Variant „D" vedený podpovrchovo bude mať v chránenom území minimálny vplyv na scenériu krajiny, je však potrebné v prípade portálových a predportálových úsekoch tunela venovať dostatočnú pozornosť zakomponovania vjazdov a výjazdov do scenérie krajiny.

Pri variantoch „C" a „E" možno vplyvy na scenériu krajiny považovať za málo významné počas výstavby aj prevádzky, vzhľadom na charakter súčasnej krajiny. Inak však bude pôsobiť mostný objekt premosťujúci Dunaj v chránenom území, kde je potrebné zabezpečiť jeho architektonické stvárnenie zakomponované v území Dunajských luhov so zohľadnením požiadaviek na minimalizáciu vplyvov pre migráciu a prelietavania vtáctva.

Kvalita života dotknutého obyvateľstva bude vnímaná inak počas výstavby a inak počas prevádzky. Počas výstavby bude silne ovplyvnená kumuláciou negatívnych faktorov ako budú hluk, vibrácie, lokálne zvýšenie znečistenia ovzdušia imisiami od dopravy, obmedzenie dopravy na súčasných komunikáciách a tým vznik kolapsov v doprave. Považujeme tento vplyv za významný počas výstavby a za málo významný počas prevádzky pre všetky varianty.

Navrhovaná činnosť na *územný rozvoj* možno z hľadiska negatívnych vplyvov prináša obmedzenia a limity pre ďalšie využitie územia v koridore diaľnice vzhľadom na jej

ochranné pásmo a taktiež najmä rozdelením územia líniovou stavbou s jej bariérovým pôsobením. Negatívny vplyv sa prejaví v území v okolí Jarovského ramena, kde sa plánuje s urbanizáciou tejto lokality pre účely rekreácie, športu a turizmu. Významnejšie zasahuje do tohto územia variant zelený „E", menej variant „C" a vôbec variant „D".

Infraštruktúra a doprava bude počas výstavby významne ovplyvnená z dôvodu nevyhnutných prekládok sietí a komunikácií, dopravných obmedzení a pod. Vplyv bude významne pôsobiť počas výstavby vo všetkých variantoch.

Zdravotné riziká sú spojené najmä s prevádzkou, a to najmä zvýšeným hlukom. Počas výstavby bude hluk a znečistenie ovzdušia od dopravy na stavenisku lokálne významne vplývať na dotknuté časti obcí v blízkosti stavebných dvorov, zariadení staveniska, prístupových ciest vo všetkých variantoch. Počas prevádzky budú zdravotné riziká, najmä hluk, eliminované technickými opatreniami, vplyvy budú bezvýznamné.

Pozitívne vplyvy počas výstavby predpokladáme vo zvýšení produkcie stavebnej výroby, čo prinesie zvýšený dopyt aj po iných výrobných aktivitách najmä v oblasti výroby stavebných surovín a výrobkov. Počas výstavby sa zvýši dopyt po službách, ktoré súvisia s výstavbou náročného diela. Počas prevádzky významným pozitívnym vplyvom bude odklonenie dopravy mimo intravilán dotknutých obcí a odľahčenie nulového variantu, čo bude mať celkový dopad aj na zlepšenie dostupnosti územia, zlepšenie dopravných vzťahov v celom regióne a zlepšenie súčasných nepriaznivých vplyvov najmä na obyvateľstvo (zníženie hluku, znečistenia ovzdušia, zdravotné riziká a celková pohoda a kvalita dotknutých obyvateľov).

Odôvodnenie výberu zvolenej alternatívy

Na základe výsledkov procesu posudzovania vykonaného podľa zákona NR SR č. 24/2006 Z.z. o posudzovaní vplyvov na životné prostredie, vydalo Ministerstvo životného prostredia SR Záverečné stanovisko (číslo: 318/2010-3.4/ml) dňa 28.9.2011, kde odporučilo nasledovný variant diaľnice D4:

- ***km 0,0 – 5,5 - variant „E“ - zeleného***
- ***km 5,5 – 7,5 – prepojenie na variant „C“ – červený*** (pri riešení D4 a MÚK „Ketelec“ rešpektovať polohu rýchlostnej cesty R7, D4 a riešenie MÚK „Ketelec“ z DÚR „Rýchlostná cesta R7 Bratislava – Dunajská Lužná“ a uvažovať s plánovaným predĺžením rýchlostnej cesty R7 po MÚK „Prievoz“ v rámci pripravovanej stavby „ Rýchlostná cesta R7 Bratislava Ketelec – Bratislava Prievoz“),
- ***km 7,5 – koniec úseku v trase variantu „C“ – červený*** (s upresnením vedenia trasy diaľnice D4 v kontakte s ochrannými pásmami Letiska M.R.Štefánika, doriešiť výškové riešenie a tvar MÚK „Ivanka – sever“ s nadväznosťou na riešenie následného úseku D4 Ivanka sever – križovatka Rača).

Stručné zdôvodnenie výberu zvolenej alternatívy

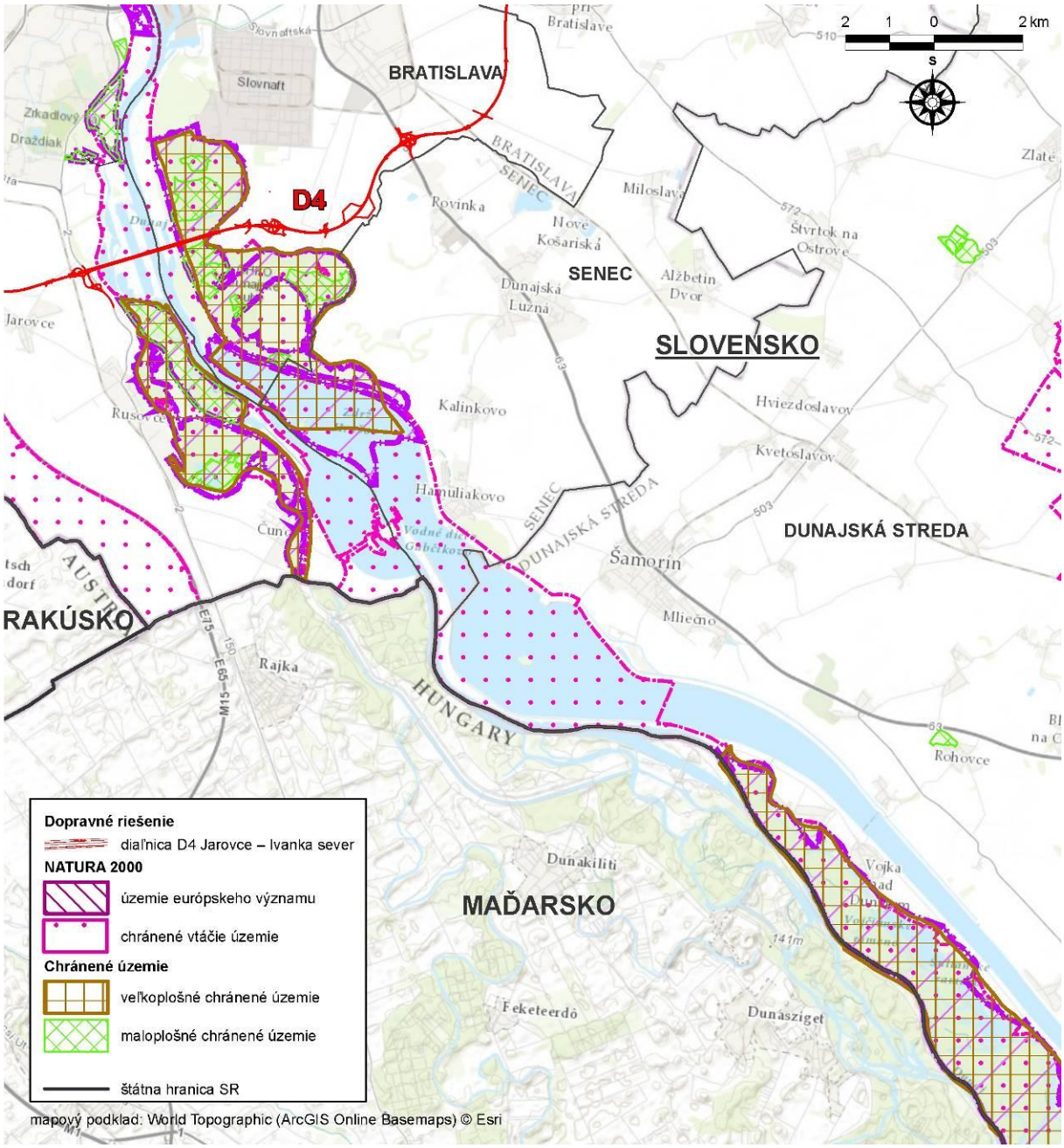
1. Enviromentálne najprijateľnejšie riešenie, žiadny výrub lesa na pravom brehu Dunaja - nezasahuje sa do PR Dunajské ostrovy a chráneného územia európskeho významu Natura 2000 na pravom brehu Dunaja. Oproti trase D4 podľa ÚP hl.m. SR Bratislava odporučený variant D4 nezasahuje sa do chránených území PR Gajc a PR Kopáčsky ostrov na ľavom brehu Dunaja, trasa je vedená územím mimo V. stupeň ochrany = zákaz umiestňovania stavieb
2. Križovanie s riekou Dunaj je kolmé a v priamej trase, čo zjednodušuje výstavbu mosta cez Dunaj a estakád (umožňuje použitie technológie vysúvania mostov),
3. Zásah do územia CHKO Dunajské luhy a do chráneného územia európskeho významu Natura 2000 na ľavom brehu Dunaja je v max. možnej miere minimalizovaný, pričom negatívne dopady prechodu diaľnice D4 cez toto územie bude eliminované vedením diaľnice D4 na estakáde až po km 5,500 čo umožní

migráciu zveri mimoúrovňovo popod diaľnicou D4. Ďalšími opatreniami je realizácia kompenzačných opatrení,

4. Dĺžka trasy D4 je kratšia oproti ostatným variantom,
5. Najvyššie úspory času cestujúcich,
6. Najnižšie prevádzkové náklady vozidiel,
7. Rešpektuje prevažnú časť vznesených pripomienok v procese posudzovania vplyvov na ŽP, doporučený variant vyhovuje väčšine verejnosti, väčšine dotknutých orgánov a organizácií,
8. Podstatná časť trasy diaľnice D4 je navrhnutá v súlade s ÚP hl.m. SR Bratislava, malé odchýlky v trase D4 a riešenia MÚK vyplývajú s podrobnejšieho preverovania v rámci DÚR, pričom všetky boli náležite zdôvodnené.

Neexistenicia alternatívnych riešení je výsledkom dlhodobého študovania trasovania „nultého okruhu“ hlavného mesta Bratislavy, ktoré jasne preukázalo, že vybraná trasa je najmenším zásahom do prírode blízkych a ekologicky cenných lokalít a je efektívne realizovateľná. Skutočnosť, že akékoľvek iné trasovanie by sa nevyhlo ekologicky cenným a chráneným územiam potvrdzuje nasledovný obrázok. Z nasledujúceho mapového výrezu je zrejme že akoukoľvek alternatívou povrchového vedenia diaľnice D4 nie je možné vyhnúť sa CHVÚ Dunajské Luhy, nakoľko toto chránené územie je vyčlenené od hlavného mesta Bratislavy smerom na juhovýchod v dĺžke cca 150 km okolo vodného toku Dunaj (pozri nasledujúci mapový výrez).

Obr. 1 Lokalizácia chránených území juhovýchodne od hlavného mesta Bratislavy



V. NALIEHAVÉ DÔVODY VYŠŠIEHO VEREJNÉHO ZÁUJMU

Opis dôvodov vyššieho verejného záujmu a objasnenie, prečo sa uvedené dôvody za takéto dôvody považujú.

V prípade zámeru výstavby a prevádzky diaľnice D4 Bratislava, Jarovce – Ivanka sever možno dôvody vyššieho verejného záujmu definovať v nasledujúcich okruhoch záujmov. Záujmy sociálnej a ekonomickej povahy, záujmy na zlepšovaní zdravia a bezpečnosti ľudí, záujmy priaznivé vplyvu na zložky životného prostredia v maximálnej možnej miere.

Záujmy socialno ekonomickej povahy

Sociálno-ekonomické účinky výstavby a prevádzky diaľnice D4 Bratislava, Jarovce - Ivanka sever sa prejavia na dopravných parametroch prerozdelením dopravy po začatí užívania nového stavebného diela, ale tiež na pôvodnej časti dotknutej cestnej siete, a to dosahovaním vyššej jazdnej rýchlosti, cestovnej rýchlosti a bezpečnosti užívateľov a znížením negatívnych účinkov na dotknutých obyvateľov, ako dôsledok vyššej kvality nového stavebného diela oproti zhoršujúcemu sa súčasnému stavu.

Ekonomické efekty sa prejavia predovšetkým u finálnych zákazníkov predmetného úseku cestnej siete poklesom ich nákladov (spotreby pohonných hmôt) spojených s prepravou tovaru a osôb, resp. s prevádzkovaním ich vozidiel. Sociálne efekty sa prejavia na poklese cestovného času cestujúcich osobných vozidiel a v autobusoch.

Pozitívnym vplyvom realizácie investície je aj zvýšenie výkonnosti cestnej siete v danej lokalite a čiastočne na území celej Bratislavy a ďalej zlepšenie obslužnosti ako aj vytvorenie podmienok pre rozvoj záujmového územia (pozitívny vplyv pre umiestňovanie potenciálnych investícii do tohto regiónu, pre investície je dobrá dopravná dostupnosť veľmi dôležitá, pozitívny vplyv na urbanistický rozvoj satelitných miest a obcí Bratislavy) a taktiež vytvorenie pracovných príležitostí v období výstavby, kedy možno očakávať prácu pre niekoľko 100 pracovníkov, rovnako v období prevádzky možno očakávať prácu pre niekoľko desiatok pracovníkov.

Záujmy na zlepšovaní zdravia a bezpečnosti ľudí

Po sprevádzkovaní stavby sa okamžite prejavia prínosy posudzovanej činnosti pre obyvateľov dotknutých obcí prerozdelením a následným znížením dopravnej intenzity na dotknutej cestnej sieti, ku ktorej dôjde v dôsledku začatia používania nového, predmetného úseku diaľnice. Znížením dopravného zaťaženia sa zvýši kvalita a pohoda života najmä obyvateľov v blízkosti ciest vedúcich cez intravilán a to znížením hluku, vibrácií a emisií, zvýši sa bezpečnosť premávky a riziko nehodovosti.

Záujmy zlepšenia zložiek životného prostredia

Ovzdušie – v súčasnosti je doprava zabezpečená cez sieť mestských komunikácií tieto budú odľahčená o záťaž, ktorú preberie diaľnica D4. Očakáva sa teda pokles produkcie škodlivín z automobilovej dopravy hlavne na mestských komunikáciách, cez ktoré v súčasnosti prechádza celý tranzit.

Hlukové zaťaženie – znížením dopravného zaťaženie dotknutých mestských a obecných komunikácii dôjde automaticky aj k úbytku hlukového zaťaženia pochádzajúceho z dopravy v týchto úsekoch.

Pôda a voda – vplyvom predpokladaného zníženia nehodovosti sa tak zároveň zníži riziko kontaminácie pôdy a vôd následkom prípadných havárií.

VI. KOMPENZAČNÉ OPATRENIA

VI.1. Celkové ciele a jednotlivé ciele vo vzťahu k biotopom a druhom a ekologické procesy, ktoré je nutné kompenzovať. Dôvody, prečo sú navrhované opatrenia vhodné na kompenzáciu negatívnych účinkov

Celkové ciele a jednotlivé ciele vo vzťahu k biotopom a druhom a ekologické procesy (funkcie), ktoré je nutné kompenzovať. Dôvody, prečo sú navrhované opatrenia vhodné na kompenzáciu negatívnych účinkov

Celkovým cieľom kompenzačných opatrení je zaistenie podmienok pre zachovanie populácie troch vtáčich druhov haje tmavej (*Milvus migrans*), orliaka morskeho (*Haliaeetus albicilla*) a bociana čierneho (*Ciconia nigra*) v priaznivom stave z hľadiska ich ochrany. Stav druhu z hľadiska ochrany je považovaný za priaznivý, keď údaje o populačnej dynamike druhu naznačujú, že sa dlhodobo udržuje ako životaschopný prvok svojho biotopu, prirodzený areál druhu sa nezmenšuje a existuje dostatok biotopov na dlhodobé zachovanie jeho populácie (§ 5 ods. 1 zákona č. 543/202 Z.z.).

Rozhodujúce pre zachovanie populácie druhov vtákov je preto zachovanie, prípadne zlepšenie ekologického stavu biotopov, na ktoré sú tieto druhy viazané.

Kompenzačné opatreniamajú v tomto prípade majú priamo nahradiť (niekoľko násobne) dotknuté hniezdne a potravné biotopy menovaných vtáčich druhov do takej miery, aby bol zachovaný celkový cieľ priaznivého stavu menovaných predmetov ochrany. Kompenzačné opatrenia priamo nahradia zabrané, alebo inak ovplyvnené hniezdne a potravné biotopy výstavbou a prevádzkou diaľnice D4, to konkrétne za vyrúbané a inak dotknuté lesné plochy bude vysadený nový les, za zabrané a inak ovplyvnené trávnaté plochy bude vysadená nová trávna plocha s trvalým trávnym porastom, za obmedzenie využívania vodných plôch ako potravného biotopu bude zrevitalizovaná plocha Biskupického ramena aby zlepšila potravinovú ponuku v ďalšom území CHVÚ. Ich umiestnenie je navrhnuté v miestach minimálnych antropogénnych aktivít, čo ešte zvýrazňuje ich vhodnosť spoolu s ďalšími dôvodmi, ktoré sú podrobnejšie rozpísané v nasledujúcich kapitolách.

VI.2. Rozsah kompenzačných opatrení a ich lokalizácia vo vzťahu k lokalite negatívne ovplyvnenej plánom alebo projektom

Rozsah kompenzačných opatrení (plocha, veľkosť populácie) a ich lokalizácia vo vzťahu k lokalite negatívne ovplyvnenej plánom alebo projektom

Rozsah a členenie kompenzačných opatrení detailne popisuje nasledujúca tabuľka.

Tab. 6: *Členenie a rozsah kompenzačných opatrení pre zámer D4 Bratislava, Jarovce – Ivanka sever*

ROZSAH KOMPENZAČNÝCH OPATRENÍ	ROZČLENENIE V RÁMCI DUR DIAĽNICE D4 BRATISLAVA, JAROVCE – IVANKA SEVER
Nové lesné plochy (20 ha)	Objekt 071 **Kompenzačné opatrenie 1**, zmena pozemkov na lesný pozemok v k.u. Rusovce
	Objekt 072 **Kompenzačné opatrenie 2**, zmena pozemkov na lesný pozemok v k.u. Čunovo
	Objekt 073 **Kompenzačné opatrenie 3**, zmena pozemkov na lesný pozemok v k.u. Čunovo
Nové trávne plochy (30 ha)	Objekt 074 **Kompenzačné opatrenie 4**, zatrávnenie pozemkov v k.u. Podunajské Biskupice
	Objekt 075 **Kompenzačné opatrenie 5**, zatrávnenie pozemkov v k.u. Kalinkovo
Sprietočnenie Biskupického ramena	Objekt 076 **Kompenzačné opatrenie 6**, sprietočnenie Biskupického ramena
	Objekt 077 **Kompenzačné opatrenie 6**, most na lesnej ceste nad Biskupickým ramenom
Zabezpečenie ochrany existujúcich lesných porastov (20 ha)	**Kompenzačné opatrenie 7**, Legislatívna ochrana lesných biotopov

Časť územia negatívne ovplyvneného zámerom výstavby a prevádzky diaľnice D4 je možno lokalizovať v okolí pomyselnej priamky medzi obcou Jarovce a juhovýchodným okrajom priamyselného areálu spoločnosti Slovnaft, a.s. Vo vzťahu k tomuto dotknutéme územiu sú kompenzačné opatrenia situované do širokého okolia dotknutého územia, aby priniesli potrebný ekologický efekt bez ďalších nežiadúcich vplyvov a rovnako aby boli dostupné pre jedince, ktorých habitáty budu zámerom zničené či inak ovplyvnené.

Všetky kompenzačné opatrenia sú vo vzdialenosti do cca 5,5 km od zámeru. Sprietočnenie Biskupického ramena je situované na sever od diaľnice D4 ostatné kompenzačné opatrenia na juh až juhovýchod od diaľnice D4.

VI.3. Identifikácia a lokalizácia oblastí, v ktorých sa majú uplatniť kompenzačné opatrenia a identifikácie vlastníckych, užívateľských a nájomných vzťahov na mieste uskutočnenie kompenzačných opatrení

Identifikácia a lokalizácia oblastí, v ktorých sa majú uplatniť kompenzačné opatrenia (vrátane máp) a identifikácie vlastníckych, užívateľských a nájomných vzťahov na mieste uskutočnenie kompenzačných opatrení

Kompenzačné opatrenie 1 - v DÚR Objekt 071

Okres:	Bratislava V
Obec:	Bratislava-m.č. Rusovce
Katastrálne územie:	Rusovce
Parcela číslo registra C-KN :	1313/1
Výmera:	7,4659 ha
Vlastníctvo:	súkromné
Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 2 - v DÚR Objekt 072

Okres:	Bratislava V
Obec:	Bratislava-m.č. Čunovo
Katastrálne územie:	Čunovo
Parcela číslo registra C-KN :	1446, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464/1, 1464/2, 1464/3, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507
Výmera:	9,0333 ha
Vlastníctvo:	súkromné, štátne (SPF)
Druh pozemku podľa KÚ:	orná pôda, trvalé trávne porasty, zastavané plochy a nádvoria, ostatné plochy
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 3 - v DÚR Objekt 073

Okres:	Bratislava V
Obec:	Bratislava-m.č. Čunovo
Katastrálne územie:	Čunovo
Parcela číslo registra C-KN :	1540, 1541/1
Výmera:	8,9109 ha
Vlastníctvo:	súkromné
Druh pozemku podľa KÚ:	orná pôda, záhrady
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 4 - v DÚR Objekt 074

Okres:	Bratislava II
Obec:	Bratislava-m.č Podunajské Biskupice
Katastrálne územie:	Podunajské Biskupice
Parcela číslo registra C-KN :	5888
Výmera:	22,6297 ha
Vlastníctvo:	súkromné, štátne (SPF)
Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Podunajské Biskupice

Kompenzačné opatrenie 5 -- v DÚR Objekt 075

Okres:	Senec
Obec:	Kalinkovo
Katastrálne územie:	Kalinkovo
Parcela číslo registra C-KN :	1099/3, 1099/6, 1099/9, 1099/10
Výmera:	9,7407 ha
Vlastníctvo:	súkromné, štátne (SPF, Lesy SR, š.p.)

Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Podunajské Biskupice

Kompenzačné opatrenie 6 - v DÚR Objekt 076

Okres:	Bratislava II
Obec:	Bratislava-m.č Podunajské Biskupice, Bratislava-m.č Ružinov
Katastrálne územie:	Podunajské Biskupice, Ružinov
Parcela číslo registra C-KN :	3880/69, 3880/90, 3985/10, 3990/13, 3990/20, 3993/7, 3993/11, 3996, 3997, 3998/8, 3998/14, 3998/15, 3998/16, 3998/18, 3998/19, 4069/1, 4072/2, 5331/1, 6248/3, 6250/13, 6250/18, 6250/19, 6250/20, 6250/22, 6250/27, 6250/28, 6251/10, 6251/11, 6251/13, 6251/14, 6267/1, 6267/6, 6269/1, 6269/2, 6269/10, 6269/11, 6269/12, 6269/13, 6292/1, 6292/9, 6292/10, 6292/11, 6292/12
Výmera:	1,4196 ha (trvalý záber) a 12,0113 (záber do 1 roka)
Vlastníctvo:	súkromné, štátne (SVP, š.p., Lesy SR, š.p.)
Druh pozemku podľa KÚ:	orná pôda, trvalé trávne porasty, lesné pozemky, vodná plocha, zastavané plochy a nádvoria, ostatné plochy
Užíva:	Lesy SR, š.p., SVP, š.p

Kompenzačné opatrenie 7

Okres:	Senec, Bratislava V
Obec:	Kalinkovo, Bratislava-m.č. Čunovo, Dunajská Lužná
Katastrálne územie:	Kalinkovo, Čunovo, Nové Košariská
Parcela číslo registra C-KN :	1510, 1432, 1440, 1399, 1489, 1444, 1443, 1442, 1441, 1435, 1436, 1437, 1433, 1431, 1445, 1434, 1397, 1395, 1398, 1400, 1093/3, 1100/3, 1098/3, 1093/2, 1093/7, 1095/1, 2765
Výmera:	23,4461 ha
Vlastníctvo:	súkromné, štátne (SPF, Lesy SR, š.p., Bratislava)
Druh pozemku podľa KÚ:	lesné pozemky
Užíva:	Lesy SR, š.p.

VI.4. Popis miesta plánovaného uskutočnenia kompenzačných opatrení. Výskyt biotopov a druhov a ich stav ochrany, využitie územia pred umiestnením kompenzačných opatrení atď.

Popis miesta plánovaného uskutočnenia kompenzačných opatrení. Výskyt biotopov a druhov a ich stav ochrany (§ 5 ods. 2 zákona), využitie územia pred umiestnením kompenzačných opatrení atď.

Kompenzačné opatrenie 1 - v DÚR Objekt 071

Plocha určená pre realizáciu tohto kompenzačného opatrenia 1 - výsadba nového lesa, je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia. V okolí plochy sa nachádzajú pozostatky lužných lesov (zo západnej

a južnej strany) rôzneho veku a druhového zloženia, či inak povedané ekologickej kvality. Zo severu je ďalšia intenzívne poľnohospodársky využívaná plocha, východná strana je ohraničená cyklotrasou a provostranným priesakovým kanálom vodného diela Gabčíkovo.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 1 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 2 - v DÚR Objekt 072

Plocha vybraná pre realizáciu kompenzačného opatrenia 2 - výsadba nového lesa, je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia podobne ako plocha pre kompenzačné opatrenie 1. V okolí plochy sa zo všetkých strán nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré).

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 2 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 3 - v DÚR Objekt 073

Plocha pre realizáciu kompenzačného opatrenia 3 - výsadba nového, lesa je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia tak ako ostatné plochy určené na zalesnenie. V okolí plochy sa zo všetkých strán nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré), z južnej strany je les ohraničujúci plochu pomerne úzky.

5 % plochy patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny, zvyšná časť tejto plochy je už mimo CHKO Dunajské Luhy, platí tu I. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 3 je súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 4 - v DÚR Objekt 074

Realizácia kompenzačného opatrenia 4 - výsadba trávnych porastov, je v súčasnosti obhospodarovanou poľnohospodárskou plochou využívanou striedavo ako trávny porast alebo ako ornú pôdu. Vybraná plocha predstavuje časť z väčšej takto obhospodarovanej plochy , konkrétne sa jedná o jeje juhovýchodnú časť. V okolí plochy (z južnej a východnej strany) sa nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré) a ostatnú časť ohraničuje poľnohospodárska pôda.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Rovnako táto plocha pre kompenzačné opatrenie 4 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 5 - v DÚR Objekt 075

Plocha pre kompenzačné opatrenie 5 - výsadba trávnych porastov, je v súčasnosti obhospodarovaná poľnohospodárskou plochou využívanou na intenzívne pestovanie rôznych plodín. V okolí plochy (zo západnej a východnej strany) sa nachádzajú pozostatky lužných lesov, ktoré v jej východnej časti zasahuju aj do časti vymedzenej plochy na zatrávnenie. Zo severnej strany ohraničuje plochu poľnohospodárska pôda, z južnej je to prevažne trávny porast v blízkosti ľavostranného priesakového kanála vodného diela Gabčíkovo.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Rovnako táto plocha pre kompenzačné opatrenie 5 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 6 - v DÚR Objekt 076

Samotné Biskupické rameno, resp. jeho pozostatky spolu s plochami určenými pre jeho revitalizáciu a sprietočnenie, sa nachádza v lesných celkoch na ľavom brehu Dunaja. Z hľadiska stavu ochrany toto územie spadá do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Ďalej je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s náležitou legislatívnou ochranou.

Samotná vodná plocha sa využíva na rybolov, okolité lesné porasty sú v prevažnej miere podriadené lesnému hospodárstvu čomu zodpovedá aj ich ekologická kvalita, až na niekoľko zachovalých úsekov brehových porastov v okolí Biskupického ramena s relatívne pôvodným druhovým zložením a prirodzeným vývojom.

Malú časť územia vymedzeného pre kompenzačné opatrenie 6 tvoria aj trávne porasty, ktoré sú v okolí umelých hrádzi kosené, inde sú ponechané prirodzenej sukcesii.

Kompenzačné opatrenie 7

Všetky lesné plochy vybrané pre zabezpečenie kompenzačného opatrenia 7 – zvýšenie legislatívnej ochrany vybraných lesných porastov spadajú do CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Ďalej sú súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s primeranou legislatívnou ochranou.

Plochy sa dlhodobo využívajú na lesohospodársku činnosť ako lužné porasty. Tu je však potrebné zdôrazniť, že v súčasnosti tvoria posledné zvyšky ako tak pôvodných lužných porastov vysokej ekologickej hodnoty bez významného podielu inváznych druhov rastlín, je teda možné povedať že z hľadiska stavu biotopu sú v priaznivom stave.

Na vybraných lesných plochách sa nachádzajú dva typy lesných biotopov a to Ls1.1 – Vŕbovo-topoľové nížinné lužné lesy (lesný diel č. 470C), druhým typom je Ls1.2 – Dubovo-brestovo-jaseňové nížinné lužné lesy (lesný diel č. 6, 467 I.PS, 467 III.PS, 469 a 470A).

VI.5. Predpokladané výsledky, ako budú navrhované opatrenia kompenzovať negatívne účinky projektu alebo plánu na integritu lokality a ako umožnia zachovať súdržnosť území sústavy chránených území

Projekt kompenzačných opatrení (kompenzačné opatrenie 1 až 3 – výsadba nových lesných porastov) vytvára dostatočné predpoklady na to, aby v súčasnosti fragmentované lesné územie pri mestskej časti Bratislava - Čunovo poskytlo dostatočne vhodné podmienky pre hniezdenie orliaka morského po zalesnení vybraných plôch a scelení fragmentovaných území. Orliak morský v tejto lokalite historicky hniezdil, no jeho hniezdisko antropogénnymi vplyvmi zaniklo, preto po skompaktnení tohto lesného porastu je veľký predpoklad jeho prinavrátenia do tejto oblasti CHVÚ za účelom hniezdenia.

Revitalizácia a sprietočnenie Biskupického ramena (kompenzačné opartrenie 6) nahradí negatívne vplyvy vyvolané výstavbou a prevádzkou diaľnice D4 na biotopy bociana čierneho v CHVÚ Dunajské luhy zlepšením a rozšírením potravných biotopov v území, čo by malo rovnako vplývať pozitívne na jeho populáciu v dotknutej časti CHVÚ.

Vytvorenie trávnych porastov (kompenzačné opatrenie 4 a 5) nahradí negatívne vplyvy pre haju tmavú rozšírením vhodných potravných biotopov pre tento druh. Čo by malo rovnako pozitívne vplývať na udržanie či rozširovanie populácie tohto druhu v celom CHVÚ.

Kompenzačné opatrenie 7 – zvýšenie legislatívnej ochrany existujúcich lesných porastov má za úlohu plniť funkciu vhodného hniezdneho biotopu pre všetky dotknuté druhy do doby, keď novovysadené lesné plochy budú ekologicky schopné plniť funkciu hniezdneho biotopu. Teda je možné povedať že cieľom tohto opatrenia je zachovanie vhodných hniezdnych biotopov v maximálne možnej miere v dotknutom území.

VI.6. Časový harmonogram realizácie kompenzačných opatrení s uvedením informácie o tom, kedy sa očakáva dosiahnutie očakávaných výsledkov

Časový harmonogram realizácie kompenzačných opatrení (vrátane dlhodobej realizácie) s uvedením informácie o tom, kedy sa očakáva dosiahnutie očakávaných výsledkov

Projekt kompenzačných opatrení ako taký, bude po vydaní územného rozhodnutia na všetky jeho časti a vysporiadasní vlastníckych vzťahov predmetom stavebného konania vrátane

získanie všetkých potrebných súhlasov a povolení. Po vydaní stavebného povolenia je potrebné realizovať kompenzačné opatrenia tak, aby aj po začiatku výstavby diaľnice D4 Bratislava, Jarovce – Ivanka sever bola zabezpečená ochrana celkovej koherencie európskej sústavy chránených území.

Očakávané výsledky z realizácie kompenzačných opatrení sa pri výsadbe trávnych porastov, realizácii sprietočnenia Biskupického ramena dostavia prakticky do 1 roka. Efekt zo zvýšenia ochrany na vybraných už existujúccich lesných porastocch sa dostavý prakticky okamžite po ukončení realizácia tohto opatrenia. Pri novovysadených lesných porastoch možno požadované výsledky (plnenie ekologických funkcii) očakávať najskor za 40 rokov od ukončenia výsadby.

Konkrétny harmonogram je súčasťou dokumentu ako samostatná príloha č. 1 Harmonogram realizácie kompenzačných opatrení.

VI.7. Zoznam požadovaných povolení na realizáciu kompenzačných opatrení podľa osobitných predpisov, ak budú potrebné, subjekty zodpovedné za ich získanie a predbežné súhlasy vlastníkov pozemkov na mieste plánovaných kompenzačných opatrení s ich realizáciou

Zoznam požadovaných povolení na realizáciu kompenzačných opatrení podľa osobitných predpisov, ak budú potrebné, subjekty zodpovedné za ich získanie a predbežné súhlasy vlastníkov (správcov, nájomcov) pozemkov na mieste plánovaných kompenzačných opatrení s ich realizáciou

Zoznam požadovaných povolení na realizáciu kompenzačných opatrení

- územné rozhodnutie
- rozhodnutie o zmene využívania územia (trávne plochy, lesné plochy)
- stavebné povolenie

Predbežné súhlasy vlastníkov pozemkov

Podľa platnej legislatívy (Stavebný zákon č. 50/1976 Zb. v platnom znení, § 38a § 108) nie je pre realizáciu kompenzačných opatrení, pre diaľnicu D4 Bratislava, Jarovce – Ivanka sever, potrebné žiadať súhlas vlastníkov pozemkov nakoľko je menovaná stavba verejným záujmom.

VI.8. Náklady a spôsob financovanie navrhovaných kompenzačných opatrení

Cena za realizáciu projektu kompenzačných opatrení je v tomto štádiu projektovej prípravy odhadovaná na 9 692 060,- Euro, zahŕňa ich samotnú realizáciu a následnú starostlivosť o ne. Samotná starostlivosť o novovzniknuté plochy a objekty je vyčíslené na necelých 30 000,- Euro na dobu 10 rokov a predstavuje pri lesných porastoch opakované zalesnenie, ochranu proti zveri, vyžínanie a plecí rub, pri trávnych porastoch je to kosenie, obracanie zhrňovanie suchej trávy, pri mostnom objekte a samotnom Biskupickom ramene (objekty 076 a 077) sa bude jednať o natieranie konštrukcii či iné drobné úpravy.

Náklady na realizáciu projektu kompenzačných opatrení a následnú starostlivosť o ne sú zahrnuté do nákladov na realizáciu stavby diaľnice D4 Bratislava, Jarovce – Ivanka sever, rovnako ako aj náklady za výkup pozemkov nevyhnutných pre ich realizáciu, či náhradu za obmedzenie vlastníckych práv ostatných dotknutých pozemkov.

VI.9. Subjekty zodpovedné za realizáciu kompenzačných opatrení

Za realizáciu projektu kompenzačných opatrení je zodpovedný investor, ktorého zámer si vyžaduje realizáciu takéhoto projektu. V tomto prípade je to NDS, a.s. ako štátna spoločnosť.

VI.10. Plán monitoringu úspešnosti kompenzačných opatrení vrátane návrhu predpokladaných nápravných opatrení s uvedením subjektov zodpovedných za ich realizáciu

Monitoring úspešnosti (funkčnosti) kompenzačných opatrení bude predmetom činnosti ŠOP SR ako štátnej inštitúcie zodpovednej za ochranu prírody, ktorá bude v prípade potreby rozhodovať aj o nápravných opatreniach (ich obsah a rozsah nie je v súčasnosti možné bližšie špecifikovať, ako ani to či vôbec budú potrebné). Za realizáciu prípadných nápravných opatrení bude zodpovedný investor stavby diaľnice D4 Jarovce – Ivanka sever, teda NDS, a.s..

Rozsah samotného monitoringu úspešnosti kompenzačných opatrení je možné zhrnúť do nasledujúcich bodov:

- Monitoring pôsobenia zámeru počas prevádzky diaľnice na populácie vtákov, ktoré sú predmetmi ochrany v CHVÚ Dunajské luhy. Jedná sa o monitoring hustoty výskytu jednotlivých vtáčích druhov do vzdialenosti min. 500 m na obe strany diaľnice. Monitoring by mal začať rok pred výstavbou a pokračovať každoročne až minimálne do 5 roku prevádzky.
- Monitoring stavu kompenzačných opatrení a ich vývoj v čase. Monitoring by mal zachytiť vývoj biotopov a ich postupné preberanie funkcii na ktoré boli realizované. Tento monitoring je potrebné začať realizovať ihneď po realizácii kompenzačných opatrení. Odhadovaná dĺžka trvania je 3 roky pre trávne porasty, 5 rokov pre monitoring funkčnosti prietočného Biskupického ramena, 10 rokov pre novozaložené lesné plochy a 20 rokov pre už existujúce lesné porasty.
- Monitoring využívania plôch kompenzačných opatrení jednotlivými vtáčími druhmi, t. j. sledovanie ich výskytu (populačnej hustoty) a to, za akým účelom využívajú tieto plochy jednotlivé vtáčie druhy, ktoré sú predmetmi ochrany. Frekvencia tohto druhu monitoringu je potrebná každoročne po dobu 5 rokov od ich realizácie, následne každých 5 rokov po dobu ďalších 20 rokov.

Je nutné poznamenať, že monitoring úspešnosti kompenzačných opatrení je v prípade potreby možné modifikovať za účelom zabezpečenie objektívnych a vierohodných výsledkov.

IV.11. Podrobný realizačný projekt kompenzačných opatrení.

Je súčasťou tohto dokumentu ako samostatná príloha č. 2 Podrobný realizačný projekt kompenzačných opatrení.

Vypracovali:

Mgr. Marek Sekerčák	- Odborne spôsobilá osoba podľa zákona č.543/2004 Z.z. - Odborne spôsobilá osoba podľa zákona č.24/2006 Z.z.,
Ing. Adéla Lepková	
Mgr. Adriana Klimeková	

Zodpovedný riešiteľ:

Mgr. Tomáš ŠIKULA	- Odborne spôsobilá osoba podľa zákona č.543/2004 Z.z. - Odborne spôsobilá osoba podľa zákona č.24/2006 Z.z., - Znalec v zozname znalcov podľa zákona č.382/2004 Z.z., odbor: Ochrana životného prostredia, odvetvia: Odhad škôd v životnom prostredí, Ochrana prírody a krajiny

DIAĽNICA D4 BRATISLAVA, JAROVCE – IVANKA SEVER

Návrh kompenzačných opatrení

Dopravné riešenie

- diaľnica D4 Jarovce – Ivanka sever
- pripravovaná rýchlostná cesta R7
- diaľnica D4 (v prevádzke)

NATURA 2000

- územie európskeho významu
- chránené vtáčie územie

Chránené územie

- veľkoplošné chránené územie
- maloplošné chránené územie
- štátna hranica SR

BRATISLAVA

Horský park (CHA)
Hlboká cesta (CHA)
Borovicový lesík (CHA)
Zeleň pri vodárni (CHA)
Bôrik (CHA)
Parčík pri Avione (CHA)
Kochova záhrada (CHA)
Jakubovský parčík (CHA)
SKUEV0064 Bratislavské luhy
SKCHVU007 Dunajské luhy
Soví les (CHA)
Hrabina (CHA)
Starý háj (PR)
SKUEV0064 Bratislavské luhy
SKUEV0064 Bratislavské luhy
Chorvátske rameno (CHA)
R7
MÚK ROVINKA
Pánsky diel (PR)
SKUEV0295 Biskupické luhy
Kopáčsky Ostrov (PR)
SKCHVU007 Dunajské luhy
MÚK KETELEC
ODPOČÍVADLO ROVINKA
D4
Jarovská bažantnica (CHA)
MÚK RUSOVCE
MÚK JAROVCE
D4
D4
Gajc (PR)
Topoľové hony (PR)
Poľovnícky les (CHA)
Dunajské ostrovy (PR)
CHKO Dunajské luhy
CHKO Dunajské luhy
Bajdeľ (CHA)
SKUEV0269 Ostrovné lúčky
SKCHVU029 Sysľovské polia
SKUEV0269 Ostrovné lúčky
SKUEV0270 Hrušovská zdrž
Ostrovné lúčky (PR)

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 10.5 11.0

S

1 0.5 0 1 km

VYPRACOVALA	DÁTUM	ÚČEL	MIERKA
Mgr. Adriána KLIMEKOVÁ	JÚL 2014	Návrh kompenzačných opatrení	1:40 000

NÁZOV VÝKRESU: **INŠTITÚTY OCHRANY PRÍRODY**

ČÍSLO VÝKRESU: **1**

HBH Projekt spol. s r.o.
organizačná zložka Slovensko
Partizánska cesta 97, 974 00 Banská Bystrica

DIAĽNICA D4 BRATISLAVA, JAROVCE – IVANKA SEVER

Návrh kompenzačných opatrení

Dopravné riešenie

- diaľnica D4 Jarovce – Ivanka sever
- pripravovaná rýchlostná cesta R7
- diaľnica D4 (v prevádzke)

Kompenzačné opatrenia

- plochy na výsadbu lesa
- plochy na zatrávnenie
- sprietočnenie Biskupického ramena
- porasty – legislatívna ochrana

Hranice územia

- katastrálna hranica územia
- štátna hranica SR

PETRŽALKA
RUŽINOV
R7
D4
MÚK ROVINKA
ODPOČÍVADLO ROVINKA
ROVINKA
NOVÉ KOŠARISKÁ
JÁNOŠÍKOVÁ
KO - 6
MÚK KETELEC
MÚK RUSOVCE
MÚK JAROVCE
PODUNAJSKÉ BISKUPICE
KO - 4
KO - 7
KO - 5
KALINKOVO
JAROVCE
RUSOVCE
KO - 1
KO - 2
KO - 7
KO - 3
HAMULIAKOVO
ČUNOVO

S

1 0.5 0 1 km

VYPRACOVALA	DÁTUM	ÚČEL	MIERKA
Mgr. Adriána KLIMEKOVÁ	JÚL 2014	Návrh kompenzačných opatrení	1:40 000

NÁZOV VÝKRESU	ČÍSLO VÝKRESU
MAPA KOMPENZAČNÝCH OPATRENÍ	2

HBH Projekt spol. s r.o.
organizačná zložka Slovensko
Partizánska cesta 97, 974 00 Banská Bystrica

DIAĽNICA D4 BRATISLAVA, JAROVCE – IVANKA SEVER

Návrh kompenzačných opatrení

NÁRODNÁ DIAĽNIČNÁ SPOLOČNOSŤ

Národná diaľničná spoločnosť, a.s., Mlynské Nivy 45, 821 09 Bratislava

DOPRAVOPROJEKT®

DOPRAVOPROJEKT, a.s., Kominárska 2, 832 03 Bratislava

HBH® projekt

HBH Projekt spol. s r.o., Kabátníkova 216/5, 602 00 Brno

Banská Bystrica, júl 2014

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I. ZÁKLADNÉ ÚDAJE O NAVRHOVATEĽOVI

I.1. Názov

Národná diaľničná spoločnosť, a.s.

I.2. Identifikační číslo

35 919 001

I.3. Sídlo

Mlynské nivy 45, 821 09 Bratislava

I.4. Meno, priezvisko, adresa, telefónne číslo a iné kontaktné údaje oprávneného zástupcu navrhovateľa

Ing. Pavol Kováčik, PhD., MBA

investičný riaditeľ a podpredseda predstavenstva,
Národná diaľničná spoločnosť , a.s., Mlynské Nivy 45, 821 09 Bratislava,
tel.: 02/58311111

I.5. Meno, priezvisko, adresa, telefónne číslo a iné kontaktné údaje osoby, od ktorej možno získať relevantné informácie o navrhovanej činnosti a navrhovaných kompenzačných opatreniach

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I.6. Informácia o tom, či návrh obsahuje informácie, ktorých zverejnenie nie je možné a prečo

Projekt neobsahuje žiadne informácie, ktoré nie je možné zverejniť.

II. POPIS PLÁNU ALEBO PROJEKTU

II.1. Názov plánu alebo projektu

Diaľnica D4 Bratislava, Jarovce – Ivanka sever

II.2.Stručný popis plánu alebo projektu, ktorý ovplyvňuje lokalitu sústavy chránených území

Stavba „Diaľnica D4 Bratislava, Jarovce – Ivanka sever“ začína napojením na existujúcu diaľnicu D2 v MÚK „Jarovce“, na území hl.m. SR Bratislava, v MČ BA – Jarovce. Diaľnica D4 je vedená v trase:

- ***v úseku od km 0,000 - 4,851***, severne od Jaroviec v trase variantu „E“ – zeleného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), mimoúrovňovo mostmi ponad cestu III/2046, ponad železničnú trať Bratislava – Rusovce a nad preložkou cesty I/2 v MÚK „Rusovce“, ďalej mostom ponad Jarovecké rameno, výhľadovou veslárskou dráhou a ponad rieku Dunaj, ďalej na ľavom brehu Dunaja estakádou cez chránené územie európskeho významu SKÚEV 0295 Biskupické Luhy (Natura 2000), mimo PR Gajc. Negatívne dopady prechodu diaľnice D4 cez toto územie budú eliminované vedením diaľnice na estakáde (celková dĺžka estakády je 3 152 m).
- ***v úseku od km 4,851 – 8,500*** trasa diaľnice D4 prechádza z variantu „E“ – zeleného do variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), pričom obchádza ťažobný priestor štrkopieskov Podunajské Biskupice z južnej a z východnej strany. V km 6,736 D4 mimoúrovňovo podcestím križuje plánovanú rýchlostnú cestu R7 v MÚK „Ketelec“ a v km 7,962 podcestím prístupovú cestu k horárni Topoľové. Trasa diaľnice D4 je oproti pôvodnej trase, posudzovanej v procese EIA, v zmysle odporúčaní Záverečného stanoviska procesu EIA č. 5461/07-7.3/ml pre R7 Bratislava – Dunajská Lužná z 9.5.2009, v MÚK „Ketelec“ odsunutá o cca 235 m severnejšie, pričom umiestnenie diaľnice D4, rýchlostnej cesty R7 a tvar MÚK „Ketelec“ vychádza z modrého variantu (A2), odporúčaného v TŠ „Rýchlostná cesta R7 Bratislava Ketelec – Bratislava Prievoz a z riešenia navrhnutého v DÚR „Rýchlostná cesta R7 Bratislava – Dunajská Lužná“. Medzi km 8,300 až km 9,350 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“.
- ***v úseku od km 8,500 – 15,000*** trasa diaľnice D4 pokračuje v trase variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011) v k.ú. Podunajské Biskupice, kde mimoúrovňovo nadcestím križuje starú dunajskú hrádzu (kultúrna a technická pamiatka), cestu I/63 v MÚK „Rovinka“ medzi Podunajskými Biskupicami a obcou Rovinka, areál Strabag-u, a.s. obchádza z južnej strany, mimoúrovňovo mostom križuje železničnú trať Bratislava – Dunajská Streda, mimoúrovňovo podcestím križuje Vinohradnícku ulicu medzi Podunajskými Biskupicami a obcou Miloslavov. V km 14,500 sa v budúcnosti plánuje vybudovať mimoúrovňovú križovatku „Podunajské Biskupice“ (D4 s R1). Ďalej trasa diaľnice D4 pokračuje západne od obce Most pri Bratislave.
- ***v úseku od km 15,000 – 22,590076*** trasa diaľnice D4 pokračuje v trase variantu „C“ - červeného (v zmysle odporúčania MŽP SR v Záverečnom stanovisku procesu EIA č. 318/2010-3.4/ml z 28.9.2011), s upresnením smerového vedenia diaľnice D4 podľa odporučeného variantu v TŠ „Diaľnica D4 Bratislava, km 15,0 – križovatka Ivanka sever – križovatka Rača“ (spracovalo v 10.2012 Združenie „ D4 Bratislava, Jarovce – Rača“) na podkladoch geodetického zamerania terénu, pri rešpektovaní ochranných pásiem

a záujmov letiska M.R.Štefánika. Trasa diaľnice D4 pokračuje západne od obce Most pri Bratislave, kde v MÚK „Most pri Bratislave“ mimoúrovňovo križuje cestu II/572, mostom križuje rieku Malý Dunaj zo západu obchádza štrkovisko Zelená voda, obchádza letisko M.R.Štefánika, pokračuje v súbehu so Šúrskym kanálom západne od obce Ivanka pri Dunaji, mimoúrovňovo križuje cestu I/61 Bratislava – Senec v MÚK „Ivanka – západ“, mimoúrovňovo mostom križuje železničnú trať Bratislava - Štúrovo a končí v MÚK „Ivanka – sever“, napojením na existujúcu diaľnicu D1, pričom diaľnica D4 je vedená popod existujúcu D1.

Celková dĺžka riešeného úseku je 22,590 076 km.

II.3. Opis a lokalizácia všetkých aktivít a častí projektu s možným dosahom na biotopy európskeho významu, druhy európskeho významu, biotopy druhov európskeho významu, vtáky vrátane sťahovavých druhov a ich biotopy a celkovú koherenciu európskej sústavy chránených území

V úseku od km cca 2,600 až 5,300 bude stavba prechádzať územím lokalít sústavy Natura 2000 (km 2,674 – 4,584 cez CHVÚ Dunajské Luhy, km 4,584 – 5,320 cez ÚEV Biskupické luhy). Celé chránené územie prechádza na estakáde dĺžky 3152 m, priľahlé úseky diaľnice D4 sú vedené v násype, resp. na menších mostných objektoch.

V úseku prechodu cez chránené územia budú pod estakádou zlikvidované lesné biotopy a vyrúbané stromy v nevyhnutnom rozsahu (dočasný záber stavby) vrátane brehových porastov, ďalej dôjde k záberu trávnych porastov a záberu poľnohospodárskej pôdy.

Okrem samotných záberov potrebných plôch bude výstavba a prevádzka diaľnice znamenať nový prírastok emisného zaťaženia územia a rušenie v podobe hluku a ľudských aktivít spojených hlavne s výstavbou diaľnice.

Súčasťou zámeru je aj prepojenie ľavobrežnej a pravobrežnej cyklotrasy pomocou mostov na D4, čo so sebou prinesie nárast turistických aktivít aj na ľavom brehu Dunaja, teda do oblasti, ktorá nebola doposiaľ intenzívnejšie využívaná, z dôvodu horšej dostupnosti než pravá strana rieky. Tým sa automaticky zvýši aj rušivý vplyv na okolitú oblasť.

Vodné plochy pod mostmi budú dotknuté iba v mieste výstavby pilierov vo vodnom toku (s umiestnením pilierov priamo do vodného toku sa ráta iba v hlavnom toku Dunaja).

Všetky vyššie menované aktivity človeka v súvislosti s diaľnicou D4 ako samotná výstavba a prevádzka diaľnice a rozvoj turistických aktivít v území budú znamenať nové vplyvy v území, v rátanie dopadov na celkovú koherenciu európskej sústavy chránených území.

Tieto aktivity je možno zhrnúť nasledovne:

- priamy záber biotopov
- ovplyvnenie využívania hniezdnych a potravných biotopov, či iného využívania územia dotknutých predmetov ochrany vplyvom hluku a emisiami pochádzajúcimi z diaľnice
- nárast turistických aktivít v území zvýšením rozsahu cyklotrás a ich vzájomného prepojenia s čím bude spojený nárast hlučnosti a priameho ovplyvňovania predmetov ochrany (vedome či nevedome usmrcovanie jedincov, priame či nepriame zásahy do biotopov)

III. POSÚDENIE NEGATÍVNYCH ÚČINKOV

III.1. Názov a kód ovplyvnených lokalít sústavy chránených území

Na základe identifikovaných vstupov a výstupov zámeru, na základe situovania zámeru v území a na základe ďalších podstatných charakteristík územia boli, ako dotknuté, zvolené nasledujúce Územia európskeho významu (ďalej tiež ÚEV) a Chránené vtáčie územie (ďalej tiež CHVÚ):

CHVÚ Dunajské luhy (SKCHVU007)
ÚEV Biskupické luhy (SKUEV0295)
CHVÚ Sysľovské polia (SKCHVU029)
ÚEV Ostrovné lúčky (SKUEV0269)
CHVÚ Malé Karpaty (SKCHVU014)
ÚEV Bratislavské luhy (SKUEV0064)

V širšom okolí zámeru sa nachádzajú ďalšie ÚEV, ktoré však boli posúdené ako zámerom neovplyvnené. Dôvodom je najmä vzdialenosť lokalít od zámeru vztiahnutá na predmety ochrany, pre ktorých ochranu boli tieto lokality sústavy Natura 2000 vyhlásené a veľkosť ich teritórií (teda zváženie možnosti výskytu predmetu ochrany v blízkosti zámeru, či iný druh ovplyvnenia zámerom).

Jedná sa o tieto lokality:

ÚEV Hrušov (SKUEV0270)
ÚEV Šúr (SKUEV0279)
ÚEV Homoľské Karpaty (SKUEV0104)

III.2. Predmet ochrany ovplyvnených lokalít sústavy chránených území

CHVÚ Dunajské luhy

Tab. 1: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[1]			Počet zimujúcich jedincov v SR[2]
		v CHVÚ	v SR	v EU (tis.)	
bocian čierny	*Ciconia nigra*	4 - 6	400 - 600	7,8 - 12	0 - 2
brehuľa hnedá	*Riparia riparia*	180 - 420	10 – 20 tis.	5400 - 9500	0
bučiačik močiarny	*Ixobrychus minutus*	12 - 34	200 - 400	60 – 120	0
čajka čiernohlavá	*Larus melanocephalus*	30 - 70	50 - 125	120 - 320	0

[1]Reporting čl. 12 v 1.1, Databáza, citováno 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/, Evropská agentura ochrany přírody, citováno 4.2. 2014. Dostupné na: http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=SKCHVU007

[2] Reporting čl. 12 v 1.1, Databáza, citováno 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/

haja tmavá	*Milvus migrans*	5 - 6	15 - 20	64 - 100	0
hlaholka severská	*Bucephala clangula*	0	0	490 - 590	9000
hrdzavka potápavá	*Netta rufina*	7 - 18	10 - 40	27 - 59	0 - 10
chochlačka sivá	*Aythya ferina*	0	500 - 1000	210 - 440	6300 - 6900
chochlačka vrkočatá	*Aythya fuligula*	0	250 - 500	730 - 880	25000 - 27000
kačica chrapľavá	*Anas querquedula*	1 - 7	100 - 200	390 - 590	0 - 30
kačica chripľavá	*Anas strepera*	12 - 21	50 - 80	60 - 96	0 - 240
kalužiak červenonohý	*Tringa totanus*	3 - 8	35 - 70	280 - 610	0
kaňa močiarna	*Circus aeruginosus*	7 - 16	1000 - 1500	93 - 140	0
ľabtuška poľná	*Anthus campestris*	4 - 6	200 - 250	1000 - 1900	0
orliak morský	*Haliaeetus albicilla*	1 - 4	10 - 14	5 – 6,6	40 - 80
potápač biely	*Mergellus albellus*	0	0	8,1 - 17	100 - 700
rybár riečny	*Sterna hirundo*	110 - 240	810 - 815	270 - 570	0
rybárik riečny	*Alcedo atthis*	20 - 45	700 - 1300	79 - 160	700 - 1400
volavka striebristá	*Egretta garzetta*	2 - 5	0 - 30	68 - 94	0

ÚEV Biskupické luhy

ÚEV Biskupické luhy bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotop (* označuje prioritný biotop)
3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a /alebo ponorených cievnatých rastlín typu Magnopotamion alebo Hydrocharition
6210 Suchomilné travinnobylinné a krovinové porasty na vápnitom podloží (*dôležité stanovištia Orchideaceae)
91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek
91G0* Karpatské a panónske dubovo-hrabové lesy
91H0* Teplomilné panónske dubové lesy

Druh (* označuje prioritný druh)
hlaváč bieloplutvý (*Cottus gobio*)
kunka červenobruchá (*Bombina bombina*)
roháč obyčajný (*Lucanus cervus*)
fuzáč veľký (*Cerambyx cerdo*)
hrúz Kesslerov (*Gobio kessleri*)
hrebenačka vysoká (*Gymnocephalus baloni*)
bobor vodný (*Castor fiber*)
hraboš severský panónsky* (*Microtus oeconomus mehelyi*)

CHVÚ Sysľovské polia

Tab. 2: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[3]			Počet zimujúcich jedincov v CHVÚ	Počet zimujúcich jedincov v SR
		v CHVÚ	v SR	v EU (tis.)		
drop fúzatý	*Otis tarda*	3-5	10	31 - 36	100	150 - 200
hus bieločelá	*Anser anbifrons*	0	0	62 - 72	1500	3700 – 4600
hus siatinná	*Anser fabalis*	0	0	140	2500	2500
sokol červenonohý	*Falco vespertinus*	5 - 20	5 - 20	26 - 39	0	0

ÚEV Ostrovné lúčky

ÚEV Ostrovné lúčky bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotopy (* označuje prioritný biotop)

91E0* Lužné vŕbovo-topoľové a jelšové lesy

3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition*

6210 Suchomilné trávno-bylinné a krovinové porasty na vápnitom podloží (*dôležité stanovištia *Orchideaceae*)

91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek

Druh

plocháč červený *(Cucujus cinaberinus)*
vážka *(Leucorrhinia pectoralis)*
roháč obyčajný *(Lucanus cervus)*
fuzáč veľký *(Cerambyx cerdo)*
hrúz Kesslerov *(Gobio kessleri)*
hrúz bieloplutvý *(Gobio albipinnatus)*
hlaváč bieloplutvý *(Cottus gobio)*
hrebenačka vysoká *(Gymnocephalus baloni)*
kolok vretenovitý *(Zingel streber)*
lopatka dúhová *(Rhodeus sericeus amarus)*
kunka červenobruchá *(Bombina bombina)*
mlok dunajský *(Triturus dobrogicus)*
netopier obyčajný *(Myotis myotis)*
bobor vodný *(Castor fiber)*

[3] http://natura2000.eea.europa.eu (citované 17.3.2014) – údaje z 10/2012,

CHVÚ Malé Karpaty

Tab. 3: V CHVÚ sú predmetom ochrany nasledujúce druhy vtákov:

Slovenský názov	Odborný názov	Predpokladaný počet hniezdiacich párov[4]			Počet zimujúcich jedincov v SR
		v CHVÚ[5]	v SR	v EU (tis.)	
sokol károh	*Falco cherug*	4	19 - 45	360 - 540	10 - 25
včelár lesný	*Pernis apivorus*	40	900 - 1300	110 - 160	0
ďateľ prostredný	*Dendrocopos medius*	300	2500 - 4000	140 - 310	4000 – 10000
ďateľ bielochrbtý	*Dendrocopos leucotos*	60	1500 - 2500	180 - 550	3000 - 6000
ďateľ hnedkavý	*Dendrocopos syriacus*	50	1500 - 2500	530 - 1100	2500 - 5000
ďateľ čierny	*Dryocopus martius*	60	1500 - 2500	740 - 1400	4500 - 6500
výr skalný	*Bubo bubo*	13	300 - 400	19 - 38	700 - 1000
bocian čierny	*Ciconia nigra*	6	400 - 600	7,8 - 12	0 - 2
lelek lesný	*Caprimulgus europaeus*	15	1000 - 2000	470 - 1000	0
sokol sťahovavý	*Falco peregrinus*	3	120 - 150	12 - 25	5 - 10
muchárik bielokrký	*Ficedula albicollis*	3900	70000 - 150000	1400 - 2400	0
muchárik červenohrdlý	*Ficedula parva*	500	5000 – 10000	1200 - 10000	0
strakoš červenochrbtý	*Lanius collurio*	1400	65000 - 130000	6300 - 13000	0
žlna sivá	*Picus canus*	100	1500 - 2000	180 - 320	3500 - 6000
penica jarabá	*Sylvia nisoria*	250	3000 - 6000	460 - 1000	0
prepelica poľná	*Coturnix coturnix*	50	2000 - 6000	730 - 2400	0
krutihlav hnedý	*Jynx torquilla*	400	2500 - 4000	580 - 1300	0
muchár sivý	*Muscicapa striata*	1000	65000 - 150000	6000 - 19000	0
žltochvost lesný	*Phoenicurus phoenicurus*	600	10000 - 15000	6800 - 16000	0
pŕhľaviar čiernohlavý	*Caxicola torquata*	1000	30000 - 50000	2000 - 4600	0
hrdlička poľná	*Streptopelia turtur*	600	15000 - 30000	3500 - 7200	0
orol kráľovský	*Aquila heliaca*	3	35 - 40	850 - 1400	20 - 50

[4] http://atlas.vtaky.sk, Kopecká (2011), http://natura2000.eea.europa.eu, Reporting čl. 12 v 1.1, Databáza, citované 4.2.2014. Dostupné na: https://www.sopsr.sk/reporting/2012/

[5] údaje z roku 2005

ÚEV Bratislavské luhy

ÚEV Bratislavské luhy bolo vyhlásené za účelom ochrany nasledujúcich predmetov ochrany:

Biotopy (* označuje prioritný biotop)

91E0* Lužné vŕbovo-topoľové a jelšové lesy

3150 Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition*

3260 Nížinné až horské vodné toky s vegetáciou zväzu *Ranunculion fluitantis* a *Callitricho-Batrachion*

91F0 Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek

Druh:

plocháč červený	*(Cucujus cinnaberinus)*
hlaváč bieloplutvý	*(Cottus gobio)*
kunka červenobruchá	*(Bombina bombina)*
priadkovec trnkový	*(Eriogaster catax)*
roháč obyčajný	*(Lucanus cervus)*
ohniváčik veľký	*(Lycaena dispar)*
uchaňa čierna	*(Barbastella barbastellus)*
netopier obyčajný	*(Myotis myotis)*
netopier pobrežný	*(Myotis dasycneme)*
lopatka dúhová	*(Rhodeus sericeus amarus)*
modráčik krvavcový	*(Maculinea teleius)*
korýtko riečne	*(Unio crassus)*
kolok vretenovitý	*(Zingel streber)*
hrúz Kesslerov	*(Gobio kessleri)*
mora Schmidtova	*(Dioszeghyana schmidtii)*
mlynárik východný	*(Leptidea morsei)*
vážka	*(Leucorrhinia pectoralis)*
hrebenačka vysoká	*(Gymnocephalus baloni)*
hrúz bieloplutvý	*(Gobio albipinnatus)*
mlok dunajský	*(Triturus dobrogicus)*
hnedáčik chrastavcový	*(Euphydryas aurinia)*
potápnik	*(Graphoderus bilineatus)*
pĺž zlatistý	*(Sabanejewia aurata)*
bobor vodný	*(Castor fiber)*

III.3. Ciele ochrany lokalít a najdôležitejšie prvky, ktoré prispievajú k integrite lokalít

CHVÚ Dunajské luhy

- **zabezpečenia priaznivého stavu biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** bociana čierneho, brehule hnedej, bučiačika močiarneho, čajky čiernohlavej, haje tmavej, hlaholky severskej, hrdzavky potápavej, chochlačky sivej, chochlačky vrkočatej, kačice chrapľavej, kačice chripľavej, kalužiaka červenonohého, kane močiarnej, ľabtušky poľnej, orliaka morského, potápača bieleho, rybára riečneho, rybárika riečneho, volavky striebristej a zabezpečenia podmienok ich prežitia a rozmnožovania.
- **zabezpečenia priaznivého stavu biotopov a zabezpečenia podmienok prežitia a rozmnožovania sťahovavých vodných druhov vtákov vytvárajúcich zoskupenia počas migrácie alebo zimovania.** Jedná sa najmä o tieto druhy: kalužiak riečny, kačica ostrochvostá, kačica lyžičiarka, kačica chrapkavá, kačica hvízdavá, kačica divá, kačica chripľavá, hus bieločelá, hus divá, hus siatinná, volavka popolavá, chochlačka sivá, chochlačka vrkočatá, chochlačka morská, chochlačka bielooká, hlaholka severská, labuť spevavá, labuť hrbozobá, volavka biela, lyska čierna, močiarnica mekotavá, sliepočka zelenonohá, potáplica severská, potáplica štíhlozobá, čajka bielohlavá, čajka sivá, čajka smejivá, močiarnica tichá, turpan tmavý, turpan čierny, potápač biely, potápač veľký, potápač dlhozobý, hrdzavka potápavá, kormorán veľký, potápka chochlatá, potápka červenokrká, potápka čiernokrká, chraštieľ vodný, potápka hnedá, kalužiak perlavý.

Územie reprezentuje hlavný tok rieky Dunaj a jej ľavý breh s lužnými lesmi. Dostatok prirodzených vodných biotopov (vodných tokov, močiarov), ale aj umelých vodných nádrží poskytuje dobré predpoklady pre hniezdenie volavky striebristej (*Egretta garzetta*), bučiačika močiarneho (*Ixobrychus minutus*), rybára riečneho (*Sterna hirundo*), kačice chrapľavej (*Anas querquedula*), kalužiaka červenonohého (*Tringa totanus*). Prítomnosť lesných biotopov, zvlášť vysokokmenných porastov, s výskytom hniezdísk orliaka morského (*Haliaeetus albicilla*), bociana čierneho *(Ciconia nigra)* a haje tmavej (*Milvus migrans*) ešte viac znásobuje hodnotu chráneného vtáčieho územia.

ÚEV Biskupické luhy

- **ochrana biotopov európskeho významu**: Teplomilné panónske dubové lesy (91H0), Karpatské a panónske dubovo-hrabové lesy (91G0), Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0) a druhov európskeho významu: fuzáč veľký (Cerambyx cerdo), roháč obyčajný (Lucanus cervus), Dioszeghyana schmidtii, hlaváč bieloplutvý (Cottus gobio), hrebenačka vysoká (Gymnocephalus baloni), hrúz Kesslerov (Gobio kessleri), kunka červenobruchá (Bombina bombina) a bobor vodný (Castor fiber).

Okrem typických lužných lesov sú tu predmetom ochrany tiež karpatské a panónske dubovo-hrabové lesy, teplomilné panónske dubové lesy, prirodzené eutrofné a mezotrofné stojaté vody, suchomilné trávno-bylinné a krovinové porasty na vápnitom podloží. Kontrast veľmi vlhkých a veľmi suchých biotopov na pomerne malej ploche je tu predpokladom pre obrovskú druhovú pestrosť rastlinstva a živočíšstva s výskytom mnohých vzácnych a ohrozených druhov.

CHVÚ Sysľovské polia

- **zachovania biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** dropa fúzatého, husi bieločelej, husi siatinnej, sokola červenonohého a **zabezpečenia podmienok ich prežitia a rozmnožovania**

Územie predstavuje panónsky typ nížiny zastúpený prevažne agrocenózami a riedkymi pásmi vetrolamov a krovín, zväčša sekundárnymi xerotermnými až semixerotermnými druhovo bohatými trávno-bylinnými spoločenstvami na spraši ach a naplaveninách rieky Dunaj. Trsnaté druhy tráv a zapojený vegetačný kryt udávajú vzhľad biotopu, ktorý na úhorových plochách polí pripomína lúčne spoločenstvá. Prevažná časť územia je však poľnohospodársky intenzívne využívaná – cieľovými plodinami sú prevažne kultúry obilnín, porasty lucerny, slnečnice a repky olejnej. Vetrolamové pásy a kroviny sú tvorené predovšetkým agátom, pajaseňom žliazkatým, javorom poľným, divou hruškou a bazou.

ÚEV Ostrovné lúčky

- **ochrana biotopov európskeho významu**: Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0), Lužné vŕbovo-topoľové a jelšové lesy (91E0), Suchomilné travinnobylinné a krovinové porasty na vápnitom podloží (6210), Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo ponorených cievnatých rastlín typu Magnopotamion alebo Hydrocharition (3150) a druhov európskeho významu: fuzáč veľký (Cerambyx cerdo), plocháč červený (Cucujus cinnaberinus), roháč obyčajný (Lucanus cervus), vážka (Leucorrhinia pectoralis), hlaváč bieloplutvý (Cottus gobio), kolok vretenovitý (Zingel streber), hrebenačka vysoká (Gymnocephalus baloni), býčko (Proterorhinus marmoratus), lopatka dúhová (Rhodeus sericeus amarus), hrúz Kesslerov (Gobio kessleri), hrúz bieloplutvý (Gobio albipinnatus), kunka červenobruchá (Bombina bombina), mlok dunajský (Triturus dobrogicus), bobor vodný (Castor fiber) a netopier obyčajný (Myotis myotis).

Územie európskeho významu Ostrovné lúčky zahŕňa zachované fragmenty pôvodne rozsiahlych lužných lesov popri toku Dunaja, lokalizované na jeho pravom brehu v blízkosti Rusoviec a Čunova. Na pomerne malom území sa tu striedajú biotopy mäkkého a tvrdého lužného lesa, stojatých vôd a ramien – v ostrom kontraste s veľmi vzácnymi suchomilnými trávnatými spoločenstvami. Takéto suché miesta sú lokalizované na miestach mohutných naplavenín štrku, siahajúcich vysoko nad hladinu podzemnej vody.

CHVÚ Malé Karpaty

- **zachovania biotopov druhov vtákov európskeho významu a biotopov sťahovavých druhov vtákov** sokola rároha, včelára lesného, ďatľa prostredného, výra skalného, lelka lesného, bociana čierneho, ďatľa bielochrbtého, ďatľa hnedkavého, ďatľa čierneho, sokola sťahovavého, muchárika bielokrkého, muchárika červenohrdlého, strakoša červenochrbtého, žlny sivej, penice jarabej, prepelice poľnej, krutihlava hnedého, muchára sivého, žltochvosta lesného, prhľaviara čiernohlavého, hrdličky poľnej a orla kráľovského a **zabezpečenia ich prežitia a rozmnožovania.**

V CHVÚ Malé Karpaty sú rozšírené prevažne lesné biotopy v rozpätí 1. vegetačného (dubový) až 4. vegetačného stupňa (bukový). Trávno-bylinné porasty, ako aj kriačinové spoločenstvá, zaberajú neveľké výmery v okrajových častiach územia a v dolinách lesných komplexov. Do CHVÚ boli zaradené aj časti vinohradov prevažne na úpätí východných svahov Pezinských Karpát. Osobitný biotop vtákov predstavujú početné skalné útvary so skalnými stenami v hrebeňovej časti Pezinských Karpát.

ÚEV Bratislavské luhy

- **ochrana biotopov európskeho významu**: Lužné dubovo-brestovo-jaseňové lesy okolo nížinných riek (91F0), Lužné vŕbovo-topoľové a jelšové lesy (91E0), Nižinné až horské vodné toky s vegetáciou zväzu *Ranunculion fluitantis* a *Callitricho-Batrachion* (3260), Prirodzené eutrofné a mezotrofné stojaté vody s vegetáciou plávajúcich a/alebo

ponorených cievnatých rastlín typu *Magnopotamion* alebo *Hydrocharition* (3150) a druhov európskeho významu: zeler plazivý *(Apium repens),* modráčik krvavcový *(Maculinea teleius),* ohniváčik veľký *(Lycaena dispar),* potápnik *(Graphoderus bilineatus),* hnedáčik chrastavcový *(Euphydryas aurinia),* priadkovec trnkový *(Eriogaster catax),* očkáň rašelinový *(Coenonympha oedippus),* bystruška potočná *(Carabus variolosus),* kováčik fialový *(Limoniscus violaceus),* roháč obyčajný *(Lucanus cervus),* babôčka *(Nymphalis vaualbum),* mlynárik východný *(Leptidea morsei),* vážka *(Leucorrhinia pectoralis), Dioszeghyana schmidtii, Bolbelasmus unicornis,* hlaváč bieloplutvý *(Cottus gobio),* kolok vretenovitý *(Zingel streber),* hrebenačka vysoká *(Gymnocephalus baloni),* býčko *(Proterorhinus marmoratus),* pĺž zlatistý *(Sabanejewia aurata),* lopatka dúhová *(Rhodeus sericeus amarus),* hrúz Kesslerov *(Gobio kessleri),* hrúz bieloplutvý *(Gobio albipinnatus),* mlok dunajský *(Triturus dobrogicus),* kunka červenobruchá *(Bombina bombina),* podkovár malý *(Rhinolophus hipposideros),* netopier obyčajný *(Myotis myotis),* netopier pobrežný *(Myotis dasycneme),* bobor vodný *(Castor fiber)* a uchaňa čierna *(Barbastella barbastellus).*

Územie je pokryté hodnotnými porastmi vŕbovo-topoľových a dubovo-brestovo-jaseňových lužných lesov s výskytom mnohých starých stromov jedinečnej ekologickej hodnoty. Lesné hospodárstvo sa tu realizovalo len v obmedzenej miere. Okrem samotných lužných lesov tu nájdeme aj pozostatky lesostepí či významné rastlinné spoločenstvá stojatých vôd a vodných tokov.

III.4. Biotopy európskeho významu a druhy európskeho významu vrátane vtákov a ich biotopov, ktoré sú predmetom ochrany a prioritné biotopy európskeho významu, ktoré budú negatívne ovplyvnené

(uvedie sa napríklad ich reprezentatívnosť, prípadne ich stav ochrany podľa § 65 ods. 1 písm. o) zákona, stupeň izolácie a ich úlohy a funkcie v rámci danej lokality)

Dotknuté predmety ochrany, na ktoré bol, v rámci primareného posúdenia podľa ustanovení článkov 6 (3) a 6 (4) smernice rady 92/43/EHS o ochrane biotopov, voľne žijúcich živočichov a voľne rastúcích rastlin, preukázaný významne negatívny vplyv, sú z výššie menovaných druhov tri druhy vtákov. A to **haja tmavá (*Milvus migrans*)**, **orliak morsky (*Heliaeetus albicilla*)** a **bocian čierný (*Ciconia nigra*)**, ktoré sú prementom ochrany CHVÚ Dunajské luhy (SKCHVU007).

Haja tmavá *(Milvus migrans)*

Na Slovensku obýva predovšetkým pahorkatiny, široké údolia medzi pohoriami, ale aj lužné lesy a nižšie pohoria. Obľubuje lesnatú krajinu prestúpenú voľnými plochami (polia, lúky), takmer vždy v blízkosti vôd, veľkých riek alebo vodných nádrží.

Európske haje tmavé sú prelietavé až sťahovavé. Zriedkavo môžu prezimovať v blízkosti hniezdiska, prípadne tiahnuť len do južnej Európy. Väčšinou však zimujú v rovníkovej až južnej Afrike. Výrazné ťahové cesty sú Gibraltar a Blízky východ. Len málo vtákov tiahne cez Taliansko. Na zimoviská odlietajú skoro, zväčša už v druhej polovici augusta, vracajú sa v prvej polovici apríla.

Na Slovensku i v celej Európe hniezdi jednotlivo, výnimočne semikoloniálne. Často hniezdi v kolóniách iných vtákov, alebo v ich blízkosti - volaviek popolavých, bocianov bielych. Páry sú asi trvalé a na hniezdiská priletujú oba vtáky spolu. Po prílete predvádzajú svadobné lety. Ich súčasťou je, že sa vtáky vysoko vo vzduchu zachytávajú pazúrmi a padajú spolu takmer až k zemi, pričom sa okolo seba otáčajú. Hniezda si stavajú na stromoch. Často používajú staré hniezda iných vtákov volaviek, kormoránov, vrán, bocianov a podobne. Vo výstelke hniezd sa okrem rastlinného materiálu často objavujú aj kusy papiera, handier, umelých hmôt, špagáty a podobne. Vajíčka začínajú znášať koncom apríla, začiatkom mája. Ich počet je 2-3 a znášané sú v intervale 2-3 dní. Inkubácia začína pred znesením posledného vajca. Na sedení sa podieľajú obaja rodičia, samica viac. Zahrievanie trvá 28-32 dní. Počas sedenia nosí samec samici potravu. Najslabšie mláďa býva staršími potlačované a niekedy hynie. Na hniezde zostávajú 42-46 dní. U nás vyletujú zväčša v priebehu júla. Pohlavnú dospelosť dosahujú vo veku najmenej 2 roky. S rodičmi sa môžu zdržovať v hniezdnom teritóriu aj ďalší rok, pričom nie sú odháňané.

Haja tmavá sa živí rôznou potravou. V blízkosti vôd prevažujú v potrave ryby. Inde môžu prevažovať cicavce, najmä drobné hlodavce, alebo vtáky. Menej loví aj obojživelníky, najmä žaby a plazy. Vysoký podiel môže tvoriť hmyz. Je o nej dobre známe, že často okráda o potravu iné druhy vtákov, najmä dravce. Často zbiera živočíchy zrazené na cestách. Tam, kde žije v mestách, alebo v ich blízkosti, živí sa zväčša odpadkami. Veľmi často požiera zdochliny. Potravu môžu zbierať aj za letu z vodnej hladiny.

Dotknuté územie využíva časť jeho hniezdnej populácie Slovenska, ktorá okrem iného využíva aj lužné lesy riek Moravy a Latorice, Borskú nížinu, Podunajskú a Východoslovenskú rovinu. Potravné teritórium môže byť podľa miestnych podmienok pomerne veľké, od hniezda až päť kilometrov aj viac. Početnosť hniezdnej populácie v rámci celej SR sa v roku 1999 odhadovala na 40 – 60 párov, dlhodobý populačný trend ukazuje jej výrazný pokles.

V časti CHVÚ dotknutom výstavbou diaľnice D4 hniezdilo v minulosti (1970 - 1990) každoročne viacero párov, v 90. rokoch 20. storočia ich počet poklesol, hniezdenie však ešte bolo pravidelné (1-3 páry). V súčasnosti hniezdi už len nepravidelne, vyskytuje sa však každoročne. Ústup počtu hniezdiacich párov bol veľmi výrazný na celom našom úseku Dunaja (napr. v roku 2009 v celom CHVÚ iba 2 páry, v roku 2011 už žiadny pár v celom

CHVÚ), resp. na celom Slovensku a haja tmavá patrí medzi naše najohrozenejšie druhy vtákov.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - nepriaznivý (U2).

Úloha a funkcia v rámci danej lokality – predátor.

Orliak morský (Haliaeetus albicilla)

U nás žije v blízkosti veľkých riek a vodných nádrží, s dostatkom rýb a vodných vtákov. V blízkosti musia byť staré lesy s veľkými stromami.

Dospelé vtáky zo stredoeurópskej oblasti sú väčšinou stále a zimu trávia v blízkosti hniezdiska. Mladé vtáky sú potulné až sťahovavé a zimujú v západnej, alebo južnej Európe. Severské vtáky sú sťahovavé a môžu u nás zimovať.

Páry orliakov sú stále po mnoho rokov a väčšinou sa rozpadajú len po smrti niektorého z partnerov. Hniezdi pomerne skoro, zásnubné lety a stavba hniezda začínajú už koncom decembra. Súčasťou svadobných letov je chytanie sa pazúrmi vo vzduchu, sprevádzané hlasným volaním. Hniezdi na vysokých mohutných stromoch, najčastejšie na topoľoch, bukoch a boroviciach. Na hniezdo musí byť dobrý prílet. Počas hniezdenia je citlivý na vyrušovanie. Hniezdo je veľmi veľké. Väčšinou má pár v teritóriu niekoľko hniezd, ktoré striedavo používa. 1-3 vajíčka znáša samica už v druhej polovici februára, alebo začiatkom marca. Inkubácia trvá 36-40 dní. Sedí hlavne samica, na krátko striedaná samcom. Hniezdna starostlivosť trvá 80-90 dní. Ešte aspoň dva mesiace po vyletení sú mláďatá potravne plne závislé na rodičoch, ktorí ich kŕmia. Pohlavnú dospelosť dosahuje až približne vo veku 5 rokov.

Potravná skladba orliaka je pestrá. Najväčšiu časť jeho potravy tvoria ryby, nasledované malými až stredne veľkými cicavcami a najrozličnejšími druhmi vtákov. Často požiera aj zdochliny, najmä v zime.

Orliak hniezdil na slovenskej strane Dunaja do polovice 60-tych rokov. Jeho vymiznutie na Slovensku po tomto období súvisí s celkovým poklesom európskej populácie v 60-tych a 70-tych rokoch, ako dôsledok prílišnej chemizácie prostredia, ale aj ako dôsledok priameho prenasledovania človekom - odstrely, zber vajíčok, chytanie do klepcov, sokoliarstvo. Od 80-tych rokoch sa začala populácia zväčšovať a čoraz častejšie sa objavovali orliaky aj u nás, predovšetkým v zimnom období. Prvé dva páry zahniezdili na našom území opäť po viac než 30 rokoch v roku 1998.

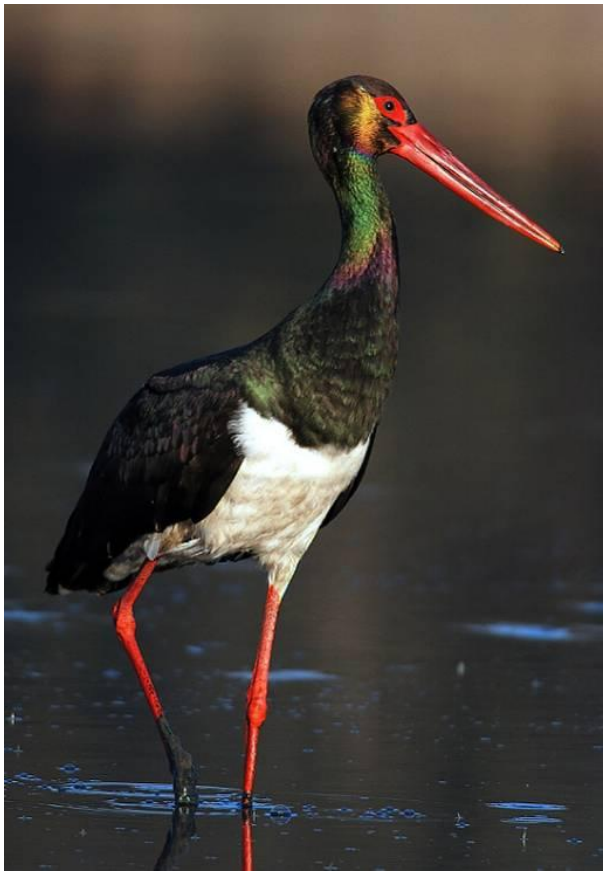
Okrem Dunaja hniezdi pri Morave a pri Zemplínskej Šírave, pri Latorici vo všetkých prípadoch na stromoch v počte asi 6 párov. Stálym zimoviskom orliaka je územie v úseku riek Dunaj a Morava v hraničných oblastiach s Maďarskom, Rakúskom a Českou republikou. Zimuje na Váhu, Hrone a ďalších vodných tokoch, ktoré v zime nezamŕzajú. Početnosť zimujúcej populácie je podstatne vyššia ako hniezdna populácia, odhaduje sa, že u nás zimuje okolo 60 - 80 jedincov.

Súčasná populácia orliaka morského v CHVÚ Dunajské luhy sú 4 páry (2006-2011). Ide o najväčšie hniezdisko druhu na Slovensku a hniezdi tu väčšina slovenskej populácie orliaka (Bohuš et al. 2009). V území priamo dotknutom výstavbou diaľnice D4 hniezdi momentálne (2009 - 2011) jeden pár.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - priaznivý (FV).

Úloha a funkcia v rámci danej lokality – predátor.

Bocian čierny (Ciconia nigra)



Sťahovavý druh, prilieta v marci až apríli, odlieta v auguste, alebo až v septembri. Obýva lesy, rovnako lužné ako listnaté, zmiešané či ihličnaté, od nížin do výšky asi 1000 m n. m. Obdobie rozmnožovania je od apríla do augusta.

Bociany čierne hniezdia samotársky. Hniezdo z konárov a vetvičiek je ukryté v korunách vysokých stromov, najmä listnatých, alebo postavené na neprístupných skalách. Obsadzujú aj staré hniezda veľkých dravých vtákov. Vo svojom teritóriu má pár niekoľko hniezd, ktoré počas rokov strieda. Hniezdo býva vo vrcholci suchého stromu, ale môže hniezdiť aj v strednej časti koruny pri kmeni, ak je dostatočný priestor pre prílety a odlety z boku. Plytké hniezdo je postavené z hrubých a suchých konárov uložených vo viacerých vrstvách. Býva naozaj veľké, pretože bociany čierne sa každý rok vracajú na to isté miesto a hniezdo stále opravujú a pristavujú. V strednej časti sú spevnené mačinou a pýrom. Horná časť je postavená z tenších konárikov a vystlaná machom, suchou trávou, niekedy lístím a srsťou. V kotlinke hniezda možno niekedy nájsť papier, handry, či zemiakovú vňať. Od hniezd iných veľkých vtákov sa odlišuje podľa vrstevnatosti uvedených materiálov.

Loví ryby do veľkosti 25 cm, okrem nich aj vodný hmyz, žaby a mloky. V oblastiach s vlhkými lúkami sa živí prevažne koníkmi, okrem toho žabami, hlodavcami a mláďatami vtákov. Potravu získava do vzdialenosti 10 km od hniezda. Z nestráviteľných častí potravy sa bocianom v žalúdku tvoria chuchvalce, tzv. vývržky, ktoré vydávia podobne ako sovy a dravce.

Na Slovensku žije v súčasnosti približne 400 až 600 párov tohto druhu. K najdôležitejším negatívnym vplyvom na tento druh u nás možno podobne ako pri predchádzajúcom druhu považovať exploatáciu nielen lužných lesov a ich okolia, ktorú zapríčiňuje lesné hospodárstvo, športové a rekreačné využívanie krajiny.

V rámci celého Slovenska sa bocian čierny vyskytuje v lete takmer na celom území, mimo severnej a západnej časti podunajskej nížiny.

V časti CHVÚ dotknutom výstavbou diaľnice D4 hniezdil v nedávnej minulosti 1 pár do roku 1995. V súčasnosti je hniezdna populácia v celom CHVÚ na historickom minime, v roku 2009 bolo zistené hniezdenie iba jedného páru. Napriek tomu sa bocian čierny vyskytuje v CHVÚ každoročne, vrátane oblasti ovplyvnenej navrhovanou činnosťou.

Hodnotenie stavu druhu z hľadiska ochrany podľa článku 12 smernice 2009/147/ES - priaznivý (FV).

Úloha a funkcia v rámci danej lokality – predátor.

III.5. Spoločenská hodnota biotopov a druhov negatívne ovplyvnených plánom/projektom

Výstavbou a prevádzkou diaľnice D4 Bratislava, Jarovce – Ivanka sever budú významne negatívne ovplyvnené tri druhy vtákov (pozri tabuľku nižšie). Ich spoločenská hodnota je stanovená vo vyhláške č. 158/2014 Z.z., ktorou sa mení a dopĺňa vyhláška Ministerstva životného prostredia Slovenskej republiky č. 24/2003 Z.z., ktorou sa vykonáva zákon č. 543/2002Z.z. o ochrane prírody a krajiny v znení neskorších predpisov.

Tab. 4: *Spoločenská hodnota významne negatívne ovplyvnených*

Negatívne ovplyvnené druhy	Spoločenská hodnota jedinca
Haja tmavá *(Milvus migrans)*	4 610,00 €
Orliak morský *(Haliaeetus albicilla)*	5 990,00 €
Bocian čierny *(Ciconia nigra)*	3 220,00 €

III.6. Význam lokality pre biotopy a druhy podľa bodu 4, ktoré budú ovplyvnené

(uvedie sa napríklad úloha lokalít v rámci Slovenskej republiky, biogeografického regiónu a území sústavy chránených území)

Diaľnica D4 Bratislava, Jarovce – Ivanka sever prechádza cez CHVÚ v jej severnej časti, konkrétne v hornej časti Hrušovskej zdrže, v ktorej nie je trvalo zaplavená celá inundačná časť. Trvale zvýšený stav hladiny je v tejto časti iba v hlavnom koryte Dunaja a v jeho ramenách. V zaplavovanej časti sa nachádzajú porasty mäkkého a tvrdého lužného lesa, príp. nížinné kosené lúky.

Kompaktná časť lesných porastov lužného lesa na ľavom brehu Dunaja v širšom okolí zámeru diaľnice je relatívne málo atakovaná ľudskými aktivitami. Svojou rozlohou a druhovým zložením sú tieto lesné celky vhodným útočiskom (hlavne **hniezdnym biotopom**) pre plaché druhy vtákov (**bocian čierny, haja tmavá, orliak morský**), ktoré sú predmetom ochrany CHVÚ Dunajské luhy.

Bocian čierny (*Ciconia nigra*)

Obýva lesy v rámci CHVÚ, ktoré využíva na hniezdenie. Potravu si hľadá na okrajoch vodných plôch alebo vodných tokov, pokiaľ možno, kryté vegetáciou. Loví ryby do veľkosti 25 cm, okrem nich aj vodný hmyz, žaby a mloky. V častiach CHVÚ s vlhkými lúkami loví aj koníky, okrem toho žaby, hlodavce či mláďaťa vtákov. Potravu získava do vzdialenosti 10 km od hniezda. Vyhľadáva pokojné a skryté miesta, ľudským sídlam sa vyhýba. Hniezdi jednotlivo na stromoch.

Haja tmavá (*Milvus migrans*)

Kompaktný porast lužného lesa v dotknutom území je veľmi vhodný pre jeho výskyt a hniezdenie. Potravné teritórium môže byť podľa miestnych podmienok pomerne veľké, od hniezda až päť kilometrov aj viac.

Z tohto pohľadu zostáva teda dotknuté územie naďalej významnou lokalitou druhu a dá sa predpokladať, že keď podunajská populácia začne znovu narastať, bude obsadzovať bývalé teritóriá v dotknutom území.

Orliak morsky (*Haliaeethus albicilla*)

Blízkosť veľké rieky a vodných nádrží, s dostatkom rýb a vodných vtákov v dotknutom území, tvoria jeho potravinovú základňu. Existencia starých lesov s veľkými stromami je vhodná pre jeho hniezdenie.

Ďalej je územie okolo Dunaja stálym zimoviskom.

Vzhľadom k vyššie uvedenému a k tomu, že v CHVÚ Dunajské luhy hniezdia 4 páry orliaka morského (ide tak o najväčšie hniezdisko druhu na Slovensku), má dotknuté územie pre druh veľký význam.

III.7. Opis očakávaných negatívnych účinkov, opis ich rozsahu, významu, veľkosti a ich lokalizácia

Opis očakávaných negatívnych účinkov (strata, poškodenie, rušenie, priame a nepriame účinky atď.), opis ich rozsahu (rozloha biotopov a počet druhov alebo oblastí výskytu ovplyvnených projektom), významu a veľkosti (napríklad ovplyvnená oblasť alebo populácia vo vzťahu k celkovej ploche a populácii danej lokality, resp. celej krajiny) a ich lokalizácia (vrátane máp)

Proces posudzovania vplyvov na životné prostredie preukázal, že stavba bude mat významný negatívny vplyv na predmety ochrany CHVÚ Dunajské luhy a to na druhy vtákov: **haje tmavej (*Milvus migrans*), orliaka morskeho (*Haliaeetus albicilla*) a bociana čierneho (*Ciconia nigra*)** a to ako v období realizácie, tak prevádzky. Tieto predmety ochrany budú ovplyvňované najmä vplyvmi: záber (priamy zásah do biotopov), hlukové a svetelné rušenie, zvýšená návštevnosť lokality po ľavobrežnej cyklotrase v lužných lesoch (rušenie), strety s vozidlami a znečistenie prostredia (zmeny imisných charakteristík, znečistenie vodného prostredia).

Záber

Záber predstavuje priamy zásah do biotopov. Stavba prechádza cez CHVÚ v jej severnej časti, konkrétne v hornej časti Hrušovskej zdrže. Približný trvalý záber činí 11,13 ha, čo je 0,067 % z celkovej rozlohy CHVÚ. Celkovo sa v celom zábere jedná o biotopy vhodné pre výskyt alebo hniezdenie niektorého druhov z predmetu ochrany. Väčšina predmetov ochrany využíva toto územie ako *potravné teritória či zhromaždiská* (migrujúce a zimujúce druhy). Podľa ornitologického prieskumu (Kúdela et al., 2011) v zámeru stavby pravidelne hniezdil pravdepodobne 1 pár bociana čierneho do roku 1995, v súčasnosti je hniezdna populácia na minime (1 hniezdiaci pár v CHVÚ), avšak v posledných rokoch zrejme dochádza k

zvyšovaniu stavov. V tom prípade by pravdepodobne došlo k opätovnému osídleniu tejto oblasti. Hniezdiská tohto druhu sú pomerne vzácne a vyžadujú preto prísnu ochranu.

V minulosti bola časť CHVÚ v okolí zámeru pravidelným hniezdiskom druhu haja tmavá V súčasnosti hniezde len nepravidelne, vyskytuje sa ale každoročne. Pretože úbytok druhu nastal na celom území SR, zostáva z celoštátneho pohľadu toto územie naďalej významnou lokalitou druhu a dá sa predpokladať, že pokiaľ dunajská populácia začne znova narastať, budú obsadzované bývalé teritóriá v území dotknutom stavbou (Kúdela, Melišková, Littera, 2011).

Súčasné hniezdne populácie druhu orliaka morského v CHVÚ činia 4 páry (2006 – 2011). Je to najväčšie hniezdisko druhu na Slovensku. V území priamo dotknutom výstavbou zámeru hniezdi 1 pár, čo je teda ¼ celkovej populácie v CHVÚ.

Z údajov uvedených vyššie, je zrejmé, že hniezdiská týchto druhov sú veľmi vzácne a vyžadujú preto prísnu ochranu. Likvidácia biotopov v priestore zámeru bola preto pre tieto druhy vyhodnotené (aj napriek relatívne malému percentu záberu v rámci CHVÚ) ako významne negatívne.

Hlukové a svetelné rušenie

Podľa Rejnen a kol. (1995) je hluková hladina pri ktorej živočíchy opúšťajú svoje habitáty z dôvodu nadmerného rušenia rôzna pri rôznych vtáčích druhoch, priemer sa však pohybuje medzi 40 – 50 dB, a to pre lesné druhy vtákov, ako aj pre vtáky otvorených stanovíšť. Preto sú ako relevantné (pre určenie významne ovplyvneného územia) brané do úvahy tieto hodnoty.

Pokiaľ spočítame plochu významne zasiahnutú nárastom hluku pri prevádzke zámeru, dostaneme číslo 336,9 ha (noc), resp. 276,6 ha (deň), čo činí 2,04 % (noc), resp. 1,68 % (deň) z celkovej rozlohy CHVÚ. Tieto percentá sú platné pre druhy haja tmavá a orliak morský, ktoré využívajú všetky zasiahnuté biotopy (napr. hniezdiska, potravné biotopy), teda lesné biotopy v Biskupických luhoch i vodné plochy a inundáciu Dunaja.

Pri druhoch využívajúcich hlavne lesné porasty Biskupických luhov, zasiahne významná miera rušenia cca 143,9 ha, tj. približne 1,7 % tohto typu prostredia v rámci CHVÚ. Jedná sa hlavne o bociana čierneho.

Z čísel, ktoré sú uvedené vyššie je možné vyvodiť závery, ktoré hovoria, že vplyvom hlukového a svetelného rušenia hlavne z prevádzky zámeru budú významne negatívne ovplyvnené menované tri vtáčie druhy.

Zvýšená návštěvnost lokality

Súčasťou zámeru je prepojenie ľavobrežnej a pravobrežnej cyklotrasy pomocou mostov na D4, odkiaľ sa bude oddeľovať pruh pre chodcov a cyklistov. Existujú preto obavy, že výrazne stúpne návštevnosť ľavého brehu (ktorý je v súčasnosti dostupný iba obtiažne), čo so sebou prinesie rušenie nielen v pobrežnej časti, ale v oblasti lužných lesov, ktoré ponúkajú útočisko druhom citlivým na rušenie ako sú bocian čierny, orliak morský a haja tmavá. S vplyvom zvýšenej návštevnosti dotknutej lokality existuje riziko, že tieto citlivé druhy budú vytlačené s nimi dosiaľ obývaných biotopov.

Zvýšenú návštevnosť a stým spojený nárast vyrušovania turistami možno očakávať v okolí jestvujúcich (cyklotrasa na ľavostrannej hrádzi pozdĺž ľavostranného priesakového kanála) či novopostavených cyklotrás na ľavom brehu Dunaja (cyklotrasa v súbehu s diaľnicou D4), čo môže zvýšiť tlak na citlivé druhy vtákov.

Zvýšená návštevnosť lokality Biskupických luhov neprispeje k zlepšeniu ekologických podmienok pre citlivé vtáčie druhy, je rozhodne vnímaná ako negatívum, no nie je ju možné klasifikovať ako významne negatívny vplyv.

Ďalšie vplyvy čo sa budú prejavovať hlavne v období prevádzky sú **strety s vozidlami** a **znečistenie prostredia**. Tieto vplyvy boli vyhodnotené ako mierne negatívne.

III.8. Možné kumulatívne dosahy a iné dosahy, ku ktorým by mohlo dôjsť v dôsledku kombinovaných opatrení posudzovaného plánu alebo projektu a iných plánov alebo projektov

Na posúdenie kumulatívnych vplyvov boli využité najmä aktuálny Územný plán veľkého územného celku Bratislavský kraj, Územný plán hlavného mesta SR Bratislava a ďalej Informačný systém SEA/EIA.

Posudzovaný zámer sa nachádza v širšom okolí hlavného mesta Bratislavy, ktoré je vystavené pomerne silným tlakom na využitie územia.

Z jestvujúcich stavieb, ktoré sa výrazne podieľajú na kumulatívnych vplyvoch, sa jedná o:

Diaľnica D1 Bratislava – Trnava, 6-pruh – súčasná diaľnica sa bude križiť s diaľnicou D4 v križovatke Ivanka sever.

Diaľnica D2 – trasa: štátna hranica CZ/SK (Lanžhot – Brodské) – Malacky – Bratislava – štátna hranica SK/HU (Čunovo – Rajka), 4-pruh. Súčasná diaľnica D2 sa bude križiť s tu hodnoteným úsekom diaľnice D4 v mimoúrovňovej križovatke BA, Jarovce.

Diaľnica D4, štátna hranica AT/SK (Jarovce) – Bratislava, Jarovce (križovatka s D2), 4-pruh – tu hodnotený úsek predstavuje predlženie D4 v mimoúrovňovej križovatke Jarovce.

Ako verejnoprospešné stavby sú v záväznej časti VÚC Bratislavského kraja uvedené:

Diaľnica D4, Ivanka sever – Rača – stavba nadväzujúca na tu posudzovaný úsek Diaľnice D4. Spoločne s ďalšími úsekmi diaľnice D4 budú tvoriť obchvat Bratislavy.

Rýchlostná cesta R1, Most pri Bratislave – Vlčkovce – stavba nadväzujúca na tu posudzovaný úsek Diaľnice D4 v križovatke Podunajské Biskupice. Tento úsek vedie paralelne (cca 10 km) juhovýchodne s existujúcou Diaľnicou D1 v smere na Trnavu.

Rýchlostná cesta R7, BA Prievoz – BA Ketelec – stavba nadväzujúca na tu posudzovaný úsek diaľnice D4 v križovatke Ketelec. Predpokladá sa realizácia súčasne s diaľnicou D4 v tu posudzovanom úseku (2016 - 2019).

Rýchlostná cesta R7, BA Ketelec – Dunajská Lužná - jedná sa o pokračovanie rýchlostnej cesty z MÚK Ketelec smerom na východ. R7 pokračuje pozdĺž Dunaja na Dunajskú Stredu – Nové Zámky – Veľký Krtíš. Pri Lučenci sa bude pripájať na plánovanú R2 do Košíc.

Trasa vysokorýchlostnej trate (VRT) v hraniciach mesta Bratislavy od ústrednej nákladnej stanice pozdĺž diaľnice D1 po odbočku Čierna voda a ďalej pozdĺž diaľnice D1 smerom na Považie.

Plochy pre výstavbu paralelnej vzletovej a pristávacej dráhy s jestvujúcou vzletovou a pristávacou dráhou 13–31 a plochy pre vybudovanie potrebnej infraštruktúry vybavovacieho procesu na letisku M. R. Štefánika. Plochy tesne susedia s navrhovaným zámerom, nachádzajú sa západne od nich.

Územie a zariadenia Vodného diela Wolfsthal. Toto vodné dielo by malo byť situované cca 11,5 km proti prúdu Dunaja od tu posudzovaných území sústavy Natura 2000. Znamenalo by ovplyvnenie hladiny vody v priestore pod stupňom, ovplyvnenie biotopov v tu posudzovanom území nemožno vylúčiť.

Ropovod a produktovody Schwechat – Slovnaft. Spojenie Slovnaftu s Rakúskom. Koridor stanovený v ÚP Bratislavy vedie cez územie sústavy Natura 2000 (CHVÚ Dunajské luhy a ÚEV Biskupické luhy – severne od ostrova Kopáč).

Vysokotlakový plynovod Slovnaft-Petržalka-Einšteinova-Mlynská dolina. Trasa povedie cez CHVÚ Dunajské luhy a ÚEV Biskupické luhy – severne od ostrova Kopáč.

Prístaviská, prístavné hrany a súvisiace stavby dopravnej a technickej infraštruktúry prístavísk vodnej dopravy na Dunaji

Ďalej je navrhnutá rozvojová funkčná plocha v priestore veslárskeho kanála pri Jaroveckom ramene a tiež pomerne rozsiahla rozvojová funkčná plocha severovýchodne od MÚK Jarovce. Priemyslová plocha v návrhu je umiestnená severne od existujúcej komunikácie E58 medzi MÚK Jarovce a štátnu hranicu SR/A.

Z vyššie uvedeného početného zoznamu plánovaných zámerov je zrejmé, že okolie posudzovaného zámeru je pod výrazným tlakom rozvojových aktivít.

Jedná sa najmä o stavby už existujúcej dopravnej infraštruktúry a priemyselných aktivít, ktoré predstavujú pomerne hustú sieť v tomto komplikovanom území. Pokiaľ k týmto existujúcim zámerom pridáme ešte plánované stavby infraštruktúry (pozri vyššie), rozvojové plochy bývania a priemyslové areály, je zrejmé, že by ľahko mohlo dôjsť k prekročeniu únosnej miery prostredia pre udržanie predmetov jednotlivých lokalít sústavy Natura 2000 v stave priaznivom z hľadiska ochrany.

V prípade CHVÚ Dunajské luhy bola už tato kapacita prostredia prekročená, a to pri tu posudzovanom zámere. V súvislosti s CHVÚ Dunajské luhy a ÚEV Biskupické luhy sú pritom plánované ďalšie zámery líniových stavieb (Ropovod a produktovody Schwechat – Slovnaft a Vysokotlakový plynovod Slovnaft-Petržalka-Einšteinova-Mlynská dolina), ktoré pretnú ľavobrežné Dunajské lužné lesy v severnej časti a budú predstavovať ďalšiu stratu cenných biotopov. Plánovaná rýchlostná cesta R7 potom bude oddeľovať tieto lokality východne od Kopáčskeho ostrova (napojenie na MÚK Ketelec). Okrem nárastu hlukového rušenia a záberu biotopov prinesie i zhoršenie migračnej priestupnosti územia.

Všeobecne najväčším problémom bude vysoká priestorová fragmentácia územia a záber cenných biotopov spolu s výrazným nárastom hlukového znečistenia pri niektorých typov stavieb.

III.9. Zmierňujúce opatrenia v rámci projektu

(uvedie sa ako sa budú realizovať a akým spôsobom zamedzia negatívnym dosahom na lokalitu alebo tieto dosahy znížia)

Fáza projektovej prípravy:

- Cestná kanalizácia je navrhnutá v dostatočnej kapacite, aby nebezpečné látky pochádzajúce z dopravy (ropné látky, oter z pneumatík, oter z brzd a pod.) boli vždy zachytené. Správca komunikácie bude tieto bezpečnostné prvky pre ochranu vôd pravidelne kontrolovať, čistiť a udržovať v plne funkčnom stave.

Opatrenie bude realizované počas výstavby a prevádzky (kontrola) a zamedzí kontaminácii povrchových a podzemných vôd v území.

- Odvodnenie mostných konštrukcií (Dunaj, Malý Dunaj a ostatné toky) bude riešené kanalizáciou s navedením k dostatočne dimenzovaným bezpečnostným prvkom pre ochranu vôd, tak ako sú riešené v DÚR.

Opatrenie bude realizované počas výstavby a prevádzky (kontrola) a zamedzí kontaminácii povrchových a podzemných vôd v území.

- Pri mostných konštrukciách vedených cez lokality sústavy Natura 2000 budú použité tiché dilatačné závery, ktoré znížia hluk v priestore pod mostom.

Opatrenie zníži hlukové zaťaženie okolitého prostredia v maximálnej miere, čím sa zmenší rozsah dotknutých lokalít sústavy Natura 2000.

- Pri mostných konštrukciách vedených cez lokality sústavy Natura 2000 budú po oboch stranách nainštalované 4 m vysoké protihlukové steny.

Opatrenie zníži hlukové zaťaženie okolitého prostredia v maximálnej miere, čím sa zmenší rozsah dotknutých lokalít sústavy Natura 2000.

Fáza realizácie:

- Dodržanie podmienok uvedených v stavebnom povolení pre zámer bude pravidelne kontrolovať ekodozor stavby.

Opatrenie zamedzí nežiaducim vplyvom mimo záber stavby a zabezpečí splnenie ostatných zmierňujúcich opatrení, ktoré sú navrhnuté.

- Rúbanie stromov v priestore záberu stavby sa bude realizovať v období mimo hniezdenia vtákov.

Opatrenie má zamedziť ohrozeniu reprodukčného cyklu vtáčích druhov až po obdobie vyvedenia mláďat.

- V blízkosti Biskupického ramena (cca km 4,590 – 4,720 zámeru) sa bude skrývka zeminy realizovať mimo obdobie rozmnožovania hraboša severského panónskeho (najlepšie v mesiacoch XII – I).

Opatrenie zamedzí narušeniu reprodukčného cyklu jedincov tohto chráneného druhu.

- Počas realizácie stavby bude potrebné okamžite zarovnávať terénne depresie, v ktorých by mohla stáť voda a mohli by sa tak stať biotopom pre rozmnožovanie obojživelníkov. V prípade nutnosti budú počas stavby nainštalované migračné bariéry na ochranu obojživelníkov.

Opatrenie má zamedziť úhynu obojživelníkov priamo na stavenisku.

- Výbavu stavebnej mechanizácie bude doplnená o havarijný balíček obsahujúci sorbent. Používať sa budú v maximálne možnej miere biodegradabilné (odbúrateľné v prírode) prevádzkové kvapaliny, mechanizáciu pracujúcu na stavbe bude nutné udržovať vo vyhovujúcom technickom stave (žiadne odkvapy).

Opatrenie má zamedziť znečisteniu pôdy a podzemnej vody a tak nepriamemu vplyvu na okolité biotopy.

- Stavebné dvory a depónie materiálu budú umiestnené mimo lokality sústavy Natura 2000.

Predíde sa tak možným rizikám kontaminácie územia priamo v rámci území Natura 2000.

Fáza prevádzky:

- Zástupcami ŠOP SR, príslušných samospráv a SVP, š.p. je potrebné znemožniť umiestňovanie nových stánkov s občerstvením pozdĺž celej ľavobrežnej cyklotrasy v priestore CHVÚ Dunajské luhy.

Cieľom opatrenia je minimalizovať vyrušovanie vtákov turistami a športovcami v dotknutých chránených územiach.

- Výstavbou sa nenaruší jestvujúci systém závor a zábran znemožňujúcich nepovolený vjazd do priestoru CHVÚ Dunajské luhy na oboch stranách Dunaja.

Opatrenie má za úlohu minimalizáciu rušenia zvýšenou návštevnosťou v CHVÚ Dunajské luhy.

- Priestor pod estakádou sa ponechá v čo najviac prírodnom stave (hlinené podložie, s kameňmi ostrovčekovite blízko seba s frakciou do 30 cm, ktoré budú zvyšovať variabilitu prostredia) s rešpektovaním potrieb a požiadaviek údržby mostného telesa.

Opatrenie zlepší migračnú priestupnosť územia pod budúcou estakádou hlavne pre plazy a drobné živočíchy.

- Pravidelnými kontrolami a likvidáciou sa bude brániť šíreniu inváznych druhov rastlín do oblastí, v ktorých bude odstránený vegetačný kryt počas stavby.

Opatrenie má zabrániť šíreniu inváznych rastlín, aby biotopy v okolí zámeru po navrátení do prírodne blízkeho stavu neboli znehodnotené.

IV. ALTERNATÍVNE RIEŠENIA

IV.1. Identifikácia a opis možných alternatívnych riešení vrátane nulovej možnosti

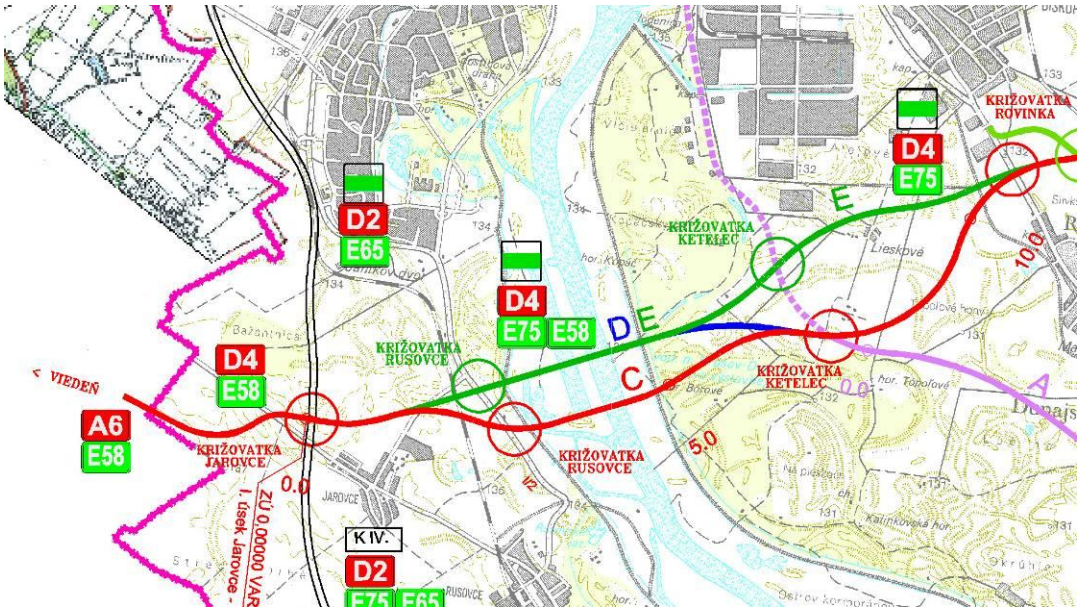
(spôsob identifikácie, postupy, metódy)

Umiestnenie predmetného úseku diaľnice D4 bolo predmetom viacerých štúdii, ktoré riešili jeho umiestnenie južne a juhovýchodne od hlavného mesta Bratislavy. Boli to štúdie:

- ***„Dopravno-urbanistická štúdia nultého okruhu okolo Bratislavy“,*** ďalej DUŠ (spracoval DOPRAVOPROJEKT, a.s. v 02.2002).
- ***„Diaľnica D4, križovatka Jarovce na D2 – križovatka Senec na D1“*** , TŠ (spracovala Alfa 04 a.s. v 06.2005)
- ***„Diaľnica D4, úsek Jarovce – Ivanka sever“ , optimalizácia umiestnenia križovatiek na D4,*** TŠ (spracoval Geoconsult,s.r.o., v 12.2007)
- ***„Štúdia realizovateľnosti a účelnosti pre ťah D4 Bratislava Jarovce – Ivanka sever – Stupava juh – št. hr. SR / RR***, (spracoval DOPRAVOPROJEKT, a.s. v 09.2009)

Na základe pripomienok vznesených pred a v rámci procesu EIA boli napokon optimalizované tri varianty diaľnice D4, ktoré sa odlišovali hlavne prechodom cez rieku Dunaj a prechodom cez chránené územie NATURA 2000 (km 0,000 – 11,000):

- variant „C“ (mostami nad riekou Dunaj) - červený
- variant „D“ (tunelom popod riekou Dunaj) - modrý
- variant „E“ (mostami nad riekou Dunaj) – zelený



VARIANT „C“ (ČERVENÝ)

Začiatok úseku je v MÚK „Jarovce“ kde sa diaľnica D4 napája na diaľnicu D2. Trasa pokračuje severne od MČ BA – Jarovce, mimoúrovňovo (mostom) križuje žel. trať Bratislava – Rusovce, cestu I/2, a pravostrannú hrádzu vodného diela Gabčíkovo, južným okrajom Jarovského ramena a plánovanej veslárskej dráhy, kolmo mostom ponad rieku Dunaj a jeho ľavostrannú hrádzu. Na pravom brehu Dunaja obchádza prírodnú rezerváciu (PR) Dunajské

ostrovy a chránené územie Natura 2000 (Ostrovné lúčky). Na ľavom brehu Dunaja prechádza estakádou cez PR Gajc (v jej najužšom mieste) a chránenú krajinnú oblasť (CHKO) Dunajské luhy, ktoré sú súčasťou chráneného územia Natura 2000 (Biskupické Luhy). Negatívne dopady prechodu diaľnice D4 cez toto územie bude eliminované vedením diaľnice D4 na estakáde až po km 5,545.

Most cez Dunaj je navrhnutý v kategórii D 33,5/120 (šesťpruh), ďalej so štvorpruhovým šírkovým usporiadaním so širším stredným deliacim pásom tak, aby bolo možné výhľadové rozšírenie diaľnice D4 na 6–pruh smerom k osi diaľnice D4 až po MÚK „Ivanka – západ“ (križovatka diaľnice D4 s cestou I/61). V rámci mostu cez Dunaj budú navrhnuté aj chodníky pre peších a pre cyklistov.

Na ľavom brehu Dunaja pokračuje diaľnica D4 južne od areálu ťažby štrkopieskov Ketelec, kde bude mimoúrovňovo križovať rýchlostnú cestu R7 a plánovanú mestskú zbernú komunikáciu od Prístavnej ulice, vedenej západne od Slovnaftu, a.s.. V km 9,250 D4 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“.

Trasa diaľnice D4 ďalej mimoúrovňovo križuje cestu I/63 medzi MČ BA - Podunajskými Biskupicami a obcou Rovinka (v MÚK „Rovinka“) a žel. trať Bratislava – Dunajská Streda. Pokračuje severne od obce Most pri Bratislave, kde v budúcnosti by mala mimoúrovňovo križovať novú, výhľadovú rýchlostnú cestu Bratislava – Vlčkovce (v zmysle zámerov NDS, a.s.) a cestu II/572. Prepojenie oboch ciest s diaľnicou D4 bude v jednej MÚK „Most pri Bratislave“ prostredníctvom kolektorových pásov.

Trasa diaľnice D4 ďalej pokračuje pred vzletovo-pristávacou dráhou VPD 13-31 Letiska M.R.Štefánika a mostom križuje rieku Malý Dunaj. V tomto úseku je diaľnica D4 vedená v zárezе tak, aby rešpektovala ochranné pásma predĺženej dráhy VPD 13-31 letiska. Diaľnica D4 ďalej prechádza mostom ponad budúcu vodnú plochu západného okraja ťažobného priestoru.

Ďalej je trasa D4 vedená východne od areálu bývalého poľnohospodárskeho družstva v lokalite Prucká sihoť (ďalej od letiska). V mieste križovania s plánovanou VPD 13L–31R letiska je diaľnica D4 vedená v zárezе cca 6,8 – 7,2 m pod úrovňou terénu tak, aby v budúcnosti (v rámci výstavby VPD 13L–31R) bolo možné dobudovať prekrytie diaľnice formou tunela „Zálesie“.

Trasa diaľnice D4 ďalej pokračuje v nízkom násype na pravom brehu, pozdĺž Šúrskeho kanála, pričom rešpektuje jeho ochranné pásma, mimoúrovňovo (mostom) križuje cestu I/61, výhľadovú komunikáciu medzi miestnou časťou Tanieriky a Sakoň, mimoúrovňovo križuje žel. trať Bratislava – Galanta a končí v mieste napojenia na diaľnicu D1 v MÚK „Ivanka – sever“. Celková dĺžka variantu „C“ je 22,801 km.

VARIANT „D“ (MODRÝ)

Začiatok úseku od MÚK „Jarovce“ po km 1,0 je riešený rovnako ako vo variante „C“, ďalej trasa diaľnice D4 mimoúrovňovo (podcestím) križuje žel. trať Bratislava – Rusovce, od MÚK „Rusovce“ pokračuje v priamke tunelom „Dunaj“ dĺžky 2,550 km popod Jarovské rameno a popod hlavným tokom rieky Dunaj, severnejšie ako pri variante „C“. Od MÚK „Ketelec“ v km 7,195 D4 (štvorlístková križovatka diaľnice D4 s rýchlostnou cestou R7 – alt. A, resp. trubkovitá križovatka pri R7 – alt. C,) pokračuje v trase podľa variantu „C“ až po MÚK „Ivanka – sever“ kde končí napojením na diaľnicu D1. Celková dĺžka variantu „D“ je 22,661 km.

Trasa tunela bude tvorená dvomi nezávislými trasami smerových pásov diaľnice, každý pre jednu tunelovú rúru. Smerovo je trasa vedená vzhľadom na charakter križovanej prekážky v priamej. Vzájomná vzdialenosť osí tunelových rúr je v hodnote dva priemery, t.j. 24 m.

Diaľnica D4 je v tuneli navrhnutá v kategórii 2T 8 (štvorpruh), ostané úseky mimo tunela sú riešené rovnako ako vo variante „C“. Pri tunelovom riešení prechodu diaľnice D4 cez rieku Dunaj nebudú v tomto koridore navrhnuté chodníky pre peších a trasy pre cyklistov (len únikové).

VARIANT „E“ (ZELENÝ)

Trasa diaľnice D4 je vedená v úseku od km 0,000 – 4,851 rovnako ako vo variante „D“, pričom križovanie so žel. traťou Bratislava – Rusovce je riešené nadcestím, trasa ďalej pokračuje mostom dĺžky 2,722 km ponad Jarovské rameno a hlavný tok rieky Dunaj. Od km 4,851 trasa pokračuje severne od plánovanej ťažby štrkopieskov „Ketelec“ a miestnu časť Lieskové. V km 8,700 D4 je navrhnuté veľké obojstranné odpočívadlo „Rovinka“. Za MÚK „Rovinka“ (križovatka D4 s cestou I/63), od km 11,119 D4 pokračuje v trase podľa variantu „C“ až po MÚK „Ivanka – sever“.

Celková dĺžka variantu „E“ je 22,169 km.

VARIANT „NULOVÝ“

Variant nulový predstavuje stav, kedy všetku automobilovú dopravu bude musieť obslúžiť systém ciest a diaľnic v dotknutom území, pričom by sa plánovaná investícia nerealizovala a s narastajúcimi nárokmi dopravy by sa musela vysporiadať existujúca cestná sieť. Hlavnú dopravnú funkciu v súčasnosti plnia úseky diaľnice D1a D2 prechádzajúce zastavaným územím Bratislavy, tieto sú doplnené dotknutými cestami I., II. a III. triedy.
Z výsledkov kapacitného posúdenia vyplýva, že v časovom horizonte roku 2015 nebudú nárokom dopravného zaťaženia vyhovovať niektoré úseky diaľnice D1 vedené v zastavanom území Bratislavy, ktoré sú zaťažené najmä mestskou dopravou. Ďalej sú nevyhovujúce úseky ciest I. triedy – I/61 a I/63, ktoré už v súčasnosti majú prekročené prípustné intenzity dopravy a priamo ovplyvňujú dopravu na vybraných úsekoch v rámci nulového variantu.
V časových horizontoch 2020, 2030 a 2040 sa z dôvodu nárastu dopravy stanú nevyhovujúce ďalšie úseky diaľnice D1.

V Správe o hodnotení vplyvov diaľnice D4, Jarovce – Ivanka sever (vypracoval Geoconsult, s.r.o, Bratislava, 04/2010) **boli teda vyhodnotené varianty**:

- ***„C" červený*** – modifikácia variantov „A" a „B" uvedených v zámere
- ***„D“ modrý*** – tunelový variant pod riekou Dunaj
- ***„E" zelený*** – alternatívny návrh (estakáda) prechodu cez Duna) v trase tunelového variantu odporučený v Štúdii realizovateľnosti a účelnosti diaľnice D4
- ***Nulový variant***

IV.2. Vyhodnotenie zvažovaných alternatív a odôvodnenie zvolenej alternatívy

(dôvody, na základe ktorých a kto dospel k záveru, že neexistujú alternatívne riešenia)

Vyhodnotenie definitívne zvažovaných alternatív vedenia diaľnice D4 v tomto území prebehlo v rámci procesu EIA, resp. v Správe o hodnotení. Vyhodnotenie bolo zhrnuté v záverečnom stanovisku vydaného Ministerstvom životného prostredia SR pod číslom: 318/2010-3.4/ml dňa 28.9.2011.

Vplyvy jednotlivých variantov boli vyhodnotené z hľadiska ich významnosti a časového priebehu pôsobenia vychádzajúc z identifikácie vstupov a výstupov navrhovanej činnosti, pričom základným členením je ich významnosť pri modifikácii súčasného stavu životného prostredia či už v negatívnom, ale aj v pozitívnom smere a taktiež aj časové hľadisko ich pôsobenia. Hodnotenie bolo kvantifikované a výsledky boli zhrnuté v tabuľke podľa nasledujúcej stupnice.

stupeň 1 - vplyvy veľmi významné

stupeň 2 - vplyvy významné

stupeň 3 - vplyvy málo významné

stupeň 4 - vplyvy bez významu

Očakávané vplyvy z hľadiska časového pôsobenia možno rozčleniť nasledovne:

a - vplyvy počas výstavby

b - vplyvy počas prevádzky

c - vplyvy počas výstavby aj prevádzky

Pri hodnotení jednotlivých vplyvov z hľadiska ich významnosti sa zohľadňoval fakt, že dotknuté územie predstavuje silne antropogénne zmenenú poľnohospodársku krajinu v blízkosti aglomerácie hlavného mesta Bratislava, obci Most pri Bratislave a Ivanka pri Dunaji. Opak tvorí začiatok úseku, kde diaľnica prechádza chránenými územiami a územiami sústavy Natura 2000. V hodnotení sa neuvažovalo s havarijnými situáciami.

Tab. 5: Predpokladané vplyvy posudzovaných variantov v procese EIA

Zložka životného prostredia	**PREDPOKLADANÝ NEGATÍVNY VPLYV Z HĽADISKA VÝZNAMNOSTI A ČASOVÉHO**		
	VARIANT „D" modrý	**VARIANT „C" červený**	**VARIANT „E" zelený**
Horninové prostredie a reliéf	1a	4a	4a
Povrchové vody	2c	2c	2c
Podzemné vody	1a,2b	2c	2c
Pôdy	1a	1a	1a
Ovzdušie	3a, 4b	3a, 4b	3a, 4b
Biota a biotopy	2a, 3b	1a, 2b	1a, 2b
Chránené územia, Natura 2000, ÚSES	2a, 3b	1a, 2b	1a, 2b
Scenéria krajiny	4c	3c	3c
Kvalita života dotknutého obyvateľstva	2a, 3b	2a, 3b	2a, 3b
Územný rozvoj	4c	3c	3c
Infraštruktúra a doprava	2a	2a	2a
Zdravotné riziká obyvateľstva	2a, 4b	2a, 4b	2a, 4b

Vyhodnotenie zvažovaných alternatívnych riešení je možné popísať aj nasledovne.

Horninové prostredie a reliéf - variant „D" tunelový bude mať veľmi významný vplyv na horninové prostredie hlavne v úseku tunela vrátane výjazdových a vjazdových rámp, keďže bude prechádzať cez vysokopriepustné horizonty štrkov, kde môže dôjsť k znečisteniu prostredia a taktiež z hľadiska geotechnických rizík bude realizácia tunela so vstupnými a výstupnými rampami veľmi náročná na zabezpečenie stability horninového prostredia vzhľadom na jeho vysoké zvodnenie a nepriaznivé inžinierskogeologické vlastnosti (kvartérne aj neogénne sedimenty) pre razenie tunela.

V trase variantov „C" a „E" možno horninové prostredie a reliéf charakterizovať ako dobre únosné, bez významných geodynamických javov s priaznivými inžinierskogeologickými vlastnosťami. Vplyvy navrhovanou činnosťou sa hodnotia ako bezvýznamné a len počas výstavby.

Povrchové vody v území reprezentujú vodné toky Dunaj, Malý Dunaj a Šúrsky kanál,

Biskupické rameno, vodné toky kanálov vybudovaných v rámci VDG a vodné plochy štrkoviska Zelená voda. Povrchové vody sú veľmi zraniteľné (možné priame znečistenie) najmä počas výstavby.

Variant „D" je v úseku Dunaja vedený tunelom, navrhovaná technológia razenia tunela nepredpokladá možné ovplyvnenie kvality a režimu povrchových vôd v dotknutom území počas výstavby, priamo dotknutý však môže byť pravobrežný priesakový kanál, ktorý je v tesnej blízkosti navrhovaného západného portálu pre razenie.

V dotknutom území sú *podzemné vody* vzhľadom na vysokú priepustnosť prostredia veľmi zraniteľné. Vplyv vedenia diaľnice vzhľadom na jej pozíciu v CHVO Žitný ostrov považujeme za významný počas výstavby aj prevádzky, pričom pri variante „D" tunelovom je počas výstavby riziko ovplyvnenia podzemných vôd až veľmi významné.

Pôdy sú ovplyvnené najmä zábermi, čiže jedná sa o veľmi významný vplyv najmä počas výstavby.

Znečistenie *ovzdušia* je ovplyvnené celkovou kvalitou ovzdušia v území. Vzhľadom na to, že súčasná doprava bude prakticky len prerozdelená a bude sa úmerne zvyšovať aj keby sa D4 nerealizovala, zmení sa však len kumulácia znečistenia ovzdušia pri zlých rozptylových podmienkach a to však v otvorenej krajine mimo intravilán obcí, kde je aj podstatne lepšia vetrateľnosť. Vplyv považujeme za bezvýznamný počas prevádzky. Počas výstavby môže dôjsť ku kumulácii znečistenia ovzdušia pri stavebných dvoroch a na prístupových cestách ku stavenisku v čase nasadenia stavebných strojov a dopravných kapacít pri zemných prácach. Vplyv možno považovať za málo významný, bude však len dočasný.

Biota, biotopy, chránené územia, Natura 2000 a ÚSES - vo variante „D" je územie len čiastočne dotknuté zásahom do lesných porastov a ekologicky významných segmentov krajiny, pričom dôjde aj k lokálnemu výrubu stromov. Tento vplyv považujeme počas výstavby za významný, kedy dôjde k priamej likvidácii lesných porastov. Počas prevádzky vplyv variantu „D" bude z hľadiska stresových faktorov málo významný.

Vo variantoch „C" a „E" je územie z hľadiska vplyvov na faunu a flóru priamo dotknuté najmä zásahom do biotopov európskeho významu a ekologicky významných segmentov krajiny, pričom dôjde aj k značnému výrubu stromov. Tento vplyv považujeme počas výstavby za veľmi významný pri oboch variantoch, kedy dôjde k priamej likvidácii biotopov. Počas prevádzky vplyv oboch variantov možno považovať za významný vzhľadom na produkciu stresových faktorov (hluk, vibrácie).

Vplyvy na scenériu krajiny variantu „D" možno považovať za bezvýznamné počas výstavby aj prevádzky, vzhľadom na charakter súčasnej krajiny. Variant „D" vedený podpovrchovo bude mať v chránenom území minimálny vplyv na scenériu krajiny, je však potrebné v prípade portálových a predportálových úsekoch tunela venovať dostatočnú pozornosť zakomponovania vjazdov a výjazdov do scenérie krajiny.

Pri variantoch „C" a „E" možno vplyvy na scenériu krajiny považovať za málo významné počas výstavby aj prevádzky, vzhľadom na charakter súčasnej krajiny. Inak však bude pôsobiť mostný objekt premosťujúci Dunaj v chránenom území, kde je potrebné zabezpečiť jeho architektonické stvárnenie zakomponované v území Dunajských luhov so zohľadnením požiadaviek na minimalizáciu vplyvov pre migráciu a prelietavania vtáctva.

Kvalita života dotknutého obyvateľstva bude vnímaná inak počas výstavby a inak počas prevádzky. Počas výstavby bude silne ovplyvnená kumuláciou negatívnych faktorov ako budú hluk, vibrácie, lokálne zvýšenie znečistenia ovzdušia imisiami od dopravy, obmedzenie dopravy na súčasných komunikáciách a tým vznik kolapsov v doprave. Považujeme tento vplyv za významný počas výstavby a za málo významný počas prevádzky pre všetky varianty.

Navrhovaná činnosť na *územný rozvoj* možno z hľadiska negatívnych vplyvov prináša obmedzenia a limity pre ďalšie využitie územia v koridore diaľnice vzhľadom na jej

ochranné pásmo a taktiež najmä rozdelením územia líniovou stavbou s jej bariérovým pôsobením. Negatívny vplyv sa prejaví v území v okolí Jarovského ramena, kde sa plánuje s urbanizáciou tejto lokality pre účely rekreácie, športu a turizmu. Významnejšie zasahuje do tohto územia variant zelený „E", menej variant „C" a vôbec variant „D".

Infraštruktúra a doprava bude počas výstavby významne ovplyvnená z dôvodu nevyhnutných prekládok sietí a komunikácií, dopravných obmedzení a pod. Vplyv bude významne pôsobiť počas výstavby vo všetkých variantoch.

Zdravotné riziká sú spojené najmä s prevádzkou, a to najmä zvýšeným hlukom. Počas výstavby bude hluk a znečistenie ovzdušia od dopravy na stavenisku lokálne významne vplývať na dotknuté časti obcí v blízkosti stavebných dvorov, zariadení staveniska, prístupových ciest vo všetkých variantoch. Počas prevádzky budú zdravotné riziká, najmä hluk, eliminované technickými opatreniami, vplyvy budú bezvýznamné.

Pozitívne vplyvy počas výstavby predpokladáme vo zvýšení produkcie stavebnej výroby, čo prinesie zvýšený dopyt aj po iných výrobných aktivitách najmä v oblasti výroby stavebných surovín a výrobkov. Počas výstavby sa zvýši dopyt po službách, ktoré súvisia s výstavbou náročného diela. Počas prevádzky významným pozitívnym vplyvom bude odklonenie dopravy mimo intravilán dotknutých obcí a odľahčenie nulového variantu, čo bude mať celkový dopad aj na zlepšenie dostupnosti územia, zlepšenie dopravných vzťahov v celom regióne a zlepšenie súčasných nepriaznivých vplyvov najmä na obyvateľstvo (zníženie hluku, znečistenia ovzdušia, zdravotné riziká a celková pohoda a kvalita dotknutých obyvateľov).

Odôvodnenie výberu zvolenej alternatívy

Na základe výsledkov procesu posudzovania vykonaného podľa zákona NR SR č. 24/2006 Z.z. o posudzovaní vplyvov na životné prostredie, vydalo Ministerstvo životného prostredia SR Záverečné stanovisko (číslo: 318/2010-3.4/ml) dňa 28.9.2011, kde odporučilo nasledovný variant diaľnice D4:

- ***km 0,0 – 5,5 - variant „E“ - zeleného***
- ***km 5,5 – 7,5 – prepojenie na variant „C“ – červený*** (pri riešení D4 a MÚK „Ketelec“ rešpektovať polohu rýchlostnej cesty R7, D4 a riešenie MÚK „Ketelec“ z DÚR „Rýchlostná cesta R7 Bratislava – Dunajská Lužná“ a uvažovať s plánovaným predĺžením rýchlostnej cesty R7 po MÚK „Prievoz“ v rámci pripravovanej stavby „ Rýchlostná cesta R7 Bratislava Ketelec – Bratislava Prievoz“),
- ***km 7,5 – koniec úseku v trase variantu „C“ – červený*** (s upresnením vedenia trasy diaľnice D4 v kontakte s ochrannými pásmami Letiska M.R.Štefánika, doriešiť výškové riešenie a tvar MÚK „Ivanka – sever“ s nadväznosťou na riešenie následného úseku D4 Ivanka sever – križovatka Rača).

Stručné zdôvodnenie výberu zvolenej alternatívy

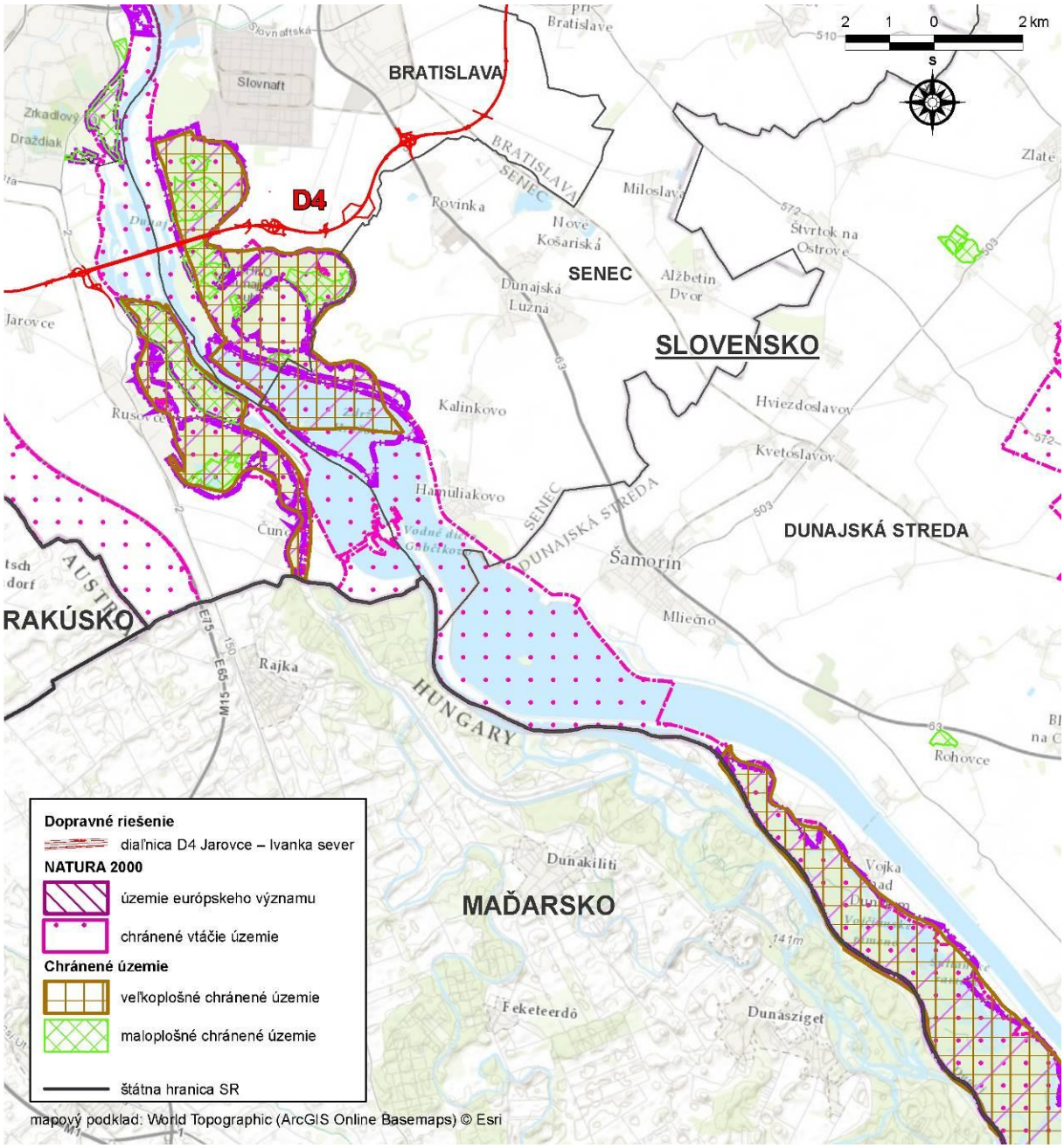
1. Enviromentálne najprijateľnejšie riešenie, žiadny výrub lesa na pravom brehu Dunaja - nezasahuje sa do PR Dunajské ostrovy a chráneného územia európskeho významu Natura 2000 na pravom brehu Dunaja. Oproti trase D4 podľa ÚP hl.m. SR Bratislava odporučený variant D4 nezasahuje sa do chránených území PR Gajc a PR Kopáčsky ostrov na ľavom brehu Dunaja, trasa je vedená územím mimo V. stupeň ochrany = zákaz umiestňovania stavieb
2. Križovanie s riekou Dunaj je kolmé a v priamej trase, čo zjednodušuje výstavbu mosta cez Dunaj a estakád (umožňuje použitie technológie vysúvania mostov),
3. Zásah do územia CHKO Dunajské luhy a do chráneného územia európskeho významu Natura 2000 na ľavom brehu Dunaja je v max. možnej miere minimalizovaný, pričom negatívne dopady prechodu diaľnice D4 cez toto územie bude eliminované vedením diaľnice D4 na estakáde až po km 5,500 čo umožní

migráciu zveri mimoúrovňovo popod diaľnicou D4. Ďalšími opatreniami je realizácia kompenzačných opatrení,

4. Dĺžka trasy D4 je kratšia oproti ostatným variantom,
5. Najvyššie úspory času cestujúcich,
6. Najnižšie prevádzkové náklady vozidiel,
7. Rešpektuje prevažnú časť vznesených pripomienok v procese posudzovania vplyvov na ŽP, doporučený variant vyhovuje väčšine verejnosti, väčšine dotknutých orgánov a organizácií,
8. Podstatná časť trasy diaľnice D4 je navrhnutá v súlade s ÚP hl.m. SR Bratislava, malé odchýlky v trase D4 a riešenia MÚK vyplývajú s podrobnejšieho preverovania v rámci DÚR, pričom všetky boli náležite zdôvodnené.

Neexistenicia alternatívnych riešení je výsledkom dlhodobého študovania trasovania „nultého okruhu“ hlavného mesta Bratislavy, ktoré jasne preukázalo, že vybraná trasa je najmenším zásahom do prírode blízkych a ekologicky cenných lokalít a je efektívne realizovateľná. Skutočnosť, že akékoľvek iné trasovanie by sa nevyhlo ekologicky cenným a chráneným územiam potvrdzuje nasledovný obrázok. Z nasledujúceho mapového výrezu je zrejme že akoukoľvek alternatívou povrchového vedenia diaľnice D4 nie je možné vyhnúť sa CHVÚ Dunajské Luhy, nakoľko toto chránené územie je vyčlenené od hlavného mesta Bratislavy smerom na juhovýchod v dĺžke cca 150 km okolo vodného toku Dunaj (pozri nasledujúci mapový výrez).

Obr. 1 Lokalizácia chránených území juhovýchodne od hlavného mesta Bratislavy



V. NALIEHAVÉ DÔVODY VYŠŠIEHO VEREJNÉHO ZÁUJMU

Opis dôvodov vyššieho verejného záujmu a objasnenie, prečo sa uvedené dôvody za takéto dôvody považujú.

V prípade zámeru výstavby a prevádzky diaľnice D4 Bratislava, Jarovce – Ivanka sever možno dôvody vyššieho verejného záujmu definovať v nasledujúcich okruhoch záujmov. Záujmy sociálnej a ekonomickej povahy, záujmy na zlepšovaní zdravia a bezpečnosti ľudí, záujmy priaznivé vplyvu na zložky životného prostredia v maximálnej možnej miere.

Záujmy socialno ekonomickej povahy

Sociálno-ekonomické účinky výstavby a prevádzky diaľnice D4 Bratislava, Jarovce - Ivanka sever sa prejavia na dopravných parametroch prerozdelením dopravy po začatí užívania nového stavebného diela, ale tiež na pôvodnej časti dotknutej cestnej siete, a to dosahovaním vyššej jazdnej rýchlosti, cestovnej rýchlosti a bezpečnosti užívateľov a znížením negatívnych účinkov na dotknutých obyvateľov, ako dôsledok vyššej kvality nového stavebného diela oproti zhoršujúcemu sa súčasnému stavu.

Ekonomické efekty sa prejavia predovšetkým u finálnych zákazníkov predmetného úseku cestnej siete poklesom ich nákladov (spotreby pohonných hmôt) spojených s prepravou tovaru a osôb, resp. s prevádzkovaním ich vozidiel. Sociálne efekty sa prejavia na poklese cestovného času cestujúcich osobných vozidiel a v autobusoch.

Pozitívnym vplyvom realizácie investície je aj zvýšenie výkonnosti cestnej siete v danej lokalite a čiastočne na území celej Bratislavy a ďalej zlepšenie obslužnosti ako aj vytvorenie podmienok pre rozvoj záujmového územia (pozitívny vplyv pre umiestňovanie potenciálnych investícii do tohto regiónu, pre investície je dobrá dopravná dostupnosť veľmi dôležitá, pozitívny vplyv na urbanistický rozvoj satelitných miest a obcí Bratislavy) a taktiež vytvorenie pracovných príležitostí v období výstavby, kedy možno očakávať prácu pre niekoľko 100 pracovníkov, rovnako v období prevádzky možno očakávať prácu pre niekoľko desiatok pracovníkov.

Záujmy na zlepšovaní zdravia a bezpečnosti ľudí

Po sprevádzkovaní stavby sa okamžite prejavia prínosy posudzovanej činnosti pre obyvateľov dotknutých obcí prerozdelením a následným znížením dopravnej intenzity na dotknutej cestnej sieti, ku ktorej dôjde v dôsledku začatia používania nového, predmetného úseku diaľnice. Znížením dopravného zaťaženia sa zvýši kvalita a pohoda života najmä obyvateľov v blízkosti ciest vedúcich cez intravilán a to znížením hluku, vibrácií a emisií, zvýši sa bezpečnosť premávky a riziko nehodovosti.

Záujmy zlepšenia zložiek životného prostredia

Ovzdušie – v súčasnosti je doprava zabezpečená cez sieť mestských komunikácií tieto budú odľahčená o záťaž, ktorú preberie diaľnica D4. Očakáva sa teda pokles produkcie škodlivín z automobilovej dopravy hlavne na mestských komunikáciách, cez ktoré v súčasnosti prechádza celý tranzit.

Hlukové zaťaženie – znížením dopravného zaťaženie dotknutých mestských a obecných komunikácii dôjde automaticky aj k úbytku hlukového zaťaženia pochádzajúceho z dopravy v týchto úsekoch.

Pôda a voda – vplyvom predpokladaného zníženia nehodovosti sa tak zároveň zníži riziko kontaminácie pôdy a vôd následkom prípadných havárií.

VI. KOMPENZAČNÉ OPATRENIA

VI.1. Celkové ciele a jednotlivé ciele vo vzťahu k biotopom a druhom a ekologické procesy, ktoré je nutné kompenzovať. Dôvody, prečo sú navrhované opatrenia vhodné na kompenzáciu negatívnych účinkov

Celkové ciele a jednotlivé ciele vo vzťahu k biotopom a druhom a ekologické procesy (funkcie), ktoré je nutné kompenzovať. Dôvody, prečo sú navrhované opatrenia vhodné na kompenzáciu negatívnych účinkov

Celkovým cieľom kompenzačných opatrení je zaistenie podmienok pre zachovanie populácie troch vtáčich druhov haje tmavej (*Milvus migrans*), orliaka morskeho (*Haliaeetus albicilla*) a bociana čierneho (*Ciconia nigra*) v priaznivom stave z hľadiska ich ochrany. Stav druhu z hľadiska ochrany je považovaný za priaznivý, keď údaje o populačnej dynamike druhu naznačujú, že sa dlhodobo udržuje ako životaschopný prvok svojho biotopu, prirodzený areál druhu sa nezmenšuje a existuje dostatok biotopov na dlhodobé zachovanie jeho populácie (§ 5 ods. 1 zákona č. 543/202 Z.z.).

Rozhodujúce pre zachovanie populácie druhov vtákov je preto zachovanie, prípadne zlepšenie ekologického stavu biotopov, na ktoré sú tieto druhy viazané.

Kompenzačné opatreniamajú v tomto prípade majú priamo nahradiť (niekoľko násobne) dotknuté hniezdne a potravné biotopy menovaných vtáčich druhov do takej miery, aby bol zachovaný celkový cieľ priaznivého stavu menovaných predmetov ochrany. Kompenzačné opatrenia priamo nahradia zabrané, alebo inak ovplyvnené hniezdne a potravné biotopy výstavbou a prevádzkou diaľnice D4, to konkrétne za vyrúbané a inak dotknuté lesné plochy bude vysadený nový les, za zabrané a inak ovplyvnené trávnaté plochy bude vysadená nová trávna plocha s trvalým trávnym porastom, za obmedzenie využívania vodných plôch ako potravného biotopu bude zrevitalizovaná plocha Biskupického ramena aby zlepšila potravinovú ponuku v ďalšom území CHVÚ. Ich umiestnenie je navrhnuté v miestach minimálnych antropogénnych aktivít, čo ešte zvýrazňuje ich vhodnosť spoolu s ďalšími dôvodmi, ktoré sú podrobnejšie rozpísané v nasledujúcich kapitolách.

VI.2. Rozsah kompenzačných opatrení a ich lokalizácia vo vzťahu k lokalite negatívne ovplyvnenej plánom alebo projektom

Rozsah kompenzačných opatrení (plocha, veľkosť populácie) a ich lokalizácia vo vzťahu k lokalite negatívne ovplyvnenej plánom alebo projektom

Rozsah a členenie kompenzačných opatrení detailne popisuje nasledujúca tabuľka.

Tab. 6: *Členenie a rozsah kompenzačných opatrení pre zámer D4 Bratislava, Jarovce – Ivanka sever*

ROZSAH KOMPENZAČNÝCH OPATRENÍ	ROZČLENENIE V RÁMCI DUR DIAĽNICE D4 BRATISLAVA, JAROVCE – IVANKA SEVER
Nové lesné plochy (20 ha)	Objekt 071 **Kompenzačné opatrenie 1**, zmena pozemkov na lesný pozemok v k.u. Rusovce
	Objekt 072 **Kompenzačné opatrenie 2**, zmena pozemkov na lesný pozemok v k.u. Čunovo
	Objekt 073 **Kompenzačné opatrenie 3**, zmena pozemkov na lesný pozemok v k.u. Čunovo
Nové trávne plochy (30 ha)	Objekt 074 **Kompenzačné opatrenie 4**, zatrávnenie pozemkov v k.u. Podunajské Biskupice
	Objekt 075 **Kompenzačné opatrenie 5**, zatrávnenie pozemkov v k.u. Kalinkovo
Sprietočnenie Biskupického ramena	Objekt 076 **Kompenzačné opatrenie 6**, sprietočnenie Biskupického ramena
	Objekt 077 **Kompenzačné opatrenie 6**, most na lesnej ceste nad Biskupickým ramenom
Zabezpečenie ochrany existujúcich lesných porastov (20 ha)	**Kompenzačné opatrenie 7**, Legislatívna ochrana lesných biotopov

Časť územia negatívne ovplyvneného zámerom výstavby a prevádzky diaľnice D4 je možno lokalizovať v okolí pomyselnej priamky medzi obcou Jarovce a juhovýchodným okrajom priamyselného areálu spoločnosti Slovnaft, a.s. Vo vzťahu k tomuto dotknutéme územiu sú kompenzačné opatrenia situované do širokého okolia dotknutého územia, aby priniesli potrebný ekologický efekt bez ďalších nežiadúcich vplyvov a rovnako aby boli dostupné pre jedince, ktorých habitáty budu zámerom zničené či inak ovplyvnené.

Všetky kompenzačné opatrenia sú vo vzdialenosti do cca 5,5 km od zámeru. Sprietočnenie Biskupického ramena je situované na sever od diaľnice D4 ostatné kompenzačné opatrenia na juh až juhovýchod od diaľnice D4.

VI.3. Identifikácia a lokalizácia oblastí, v ktorých sa majú uplatniť kompenzačné opatrenia a identifikácie vlastníckych, užívateľských a nájomných vzťahov na mieste uskutočnenie kompenzačných opatrení

Identifikácia a lokalizácia oblastí, v ktorých sa majú uplatniť kompenzačné opatrenia (vrátane máp) a identifikácie vlastníckych, užívateľských a nájomných vzťahov na mieste uskutočnenie kompenzačných opatrení

Kompenzačné opatrenie 1 - v DÚR Objekt 071

Okres:	Bratislava V
Obec:	Bratislava-m.č. Rusovce
Katastrálne územie:	Rusovce
Parcela číslo registra C-KN :	1313/1
Výmera:	7,4659 ha
Vlastníctvo:	súkromné
Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 2 - v DÚR Objekt 072

Okres:	Bratislava V
Obec:	Bratislava-m.č. Čunovo
Katastrálne územie:	Čunovo
Parcela číslo registra C-KN :	1446, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464/1, 1464/2, 1464/3, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507
Výmera:	9,0333 ha
Vlastníctvo:	súkromné, štátne (SPF)
Druh pozemku podľa KÚ:	orná pôda, trvalé trávne porasty, zastavané plochy a nádvoria, ostatné plochy
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 3 - v DÚR Objekt 073

Okres:	Bratislava V
Obec:	Bratislava-m.č. Čunovo
Katastrálne územie:	Čunovo
Parcela číslo registra C-KN :	1540, 1541/1
Výmera:	8,9109 ha
Vlastníctvo:	súkromné
Druh pozemku podľa KÚ:	orná pôda, záhrady
Užíva:	PD Dunaj Bratislava Rusovce

Kompenzačné opatrenie 4 - v DÚR Objekt 074

Okres:	Bratislava II
Obec:	Bratislava-m.č Podunajské Biskupice
Katastrálne územie:	Podunajské Biskupice
Parcela číslo registra C-KN :	5888
Výmera:	22,6297 ha
Vlastníctvo:	súkromné, štátne (SPF)
Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Podunajské Biskupice

Kompenzačné opatrenie 5 -- v DÚR Objekt 075

Okres:	Senec
Obec:	Kalinkovo
Katastrálne územie:	Kalinkovo
Parcela číslo registra C-KN :	1099/3, 1099/6, 1099/9, 1099/10
Výmera:	9,7407 ha
Vlastníctvo:	súkromné, štátne (SPF, Lesy SR, š.p.)

Druh pozemku podľa KÚ:	orná pôda
Užíva:	PD Podunajské Biskupice

Kompenzačné opatrenie 6 - v DÚR Objekt 076

Okres:	Bratislava II
Obec:	Bratislava-m.č Podunajské Biskupice, Bratislava-m.č Ružinov
Katastrálne územie:	Podunajské Biskupice, Ružinov
Parcela číslo registra C-KN :	3880/69, 3880/90, 3985/10, 3990/13, 3990/20, 3993/7, 3993/11, 3996, 3997, 3998/8, 3998/14, 3998/15, 3998/16, 3998/18, 3998/19, 4069/1, 4072/2, 5331/1, 6248/3, 6250/13, 6250/18, 6250/19, 6250/20, 6250/22, 6250/27, 6250/28, 6251/10, 6251/11, 6251/13, 6251/14, 6267/1, 6267/6, 6269/1, 6269/2, 6269/10, 6269/11, 6269/12, 6269/13, 6292/1, 6292/9, 6292/10, 6292/11, 6292/12
Výmera:	1,4196 ha (trvalý záber) a 12,0113 (záber do 1 roka)
Vlastníctvo:	súkromné, štátne (SVP, š.p., Lesy SR, š.p.)
Druh pozemku podľa KÚ:	orná pôda, trvalé trávne porasty, lesné pozemky, vodná plocha, zastavané plochy a nádvoria, ostatné plochy
Užíva:	Lesy SR, š.p., SVP, š.p

Kompenzačné opatrenie 7

Okres:	Senec, Bratislava V
Obec:	Kalinkovo, Bratislava-m.č. Čunovo, Dunajská Lužná
Katastrálne územie:	Kalinkovo, Čunovo, Nové Košariská
Parcela číslo registra C-KN :	1510, 1432, 1440, 1399, 1489, 1444, 1443, 1442, 1441, 1435, 1436, 1437, 1433, 1431, 1445, 1434, 1397, 1395, 1398, 1400, 1093/3, 1100/3, 1098/3, 1093/2, 1093/7, 1095/1, 2765
Výmera:	23,4461 ha
Vlastníctvo:	súkromné, štátne (SPF, Lesy SR, š.p., Bratislava)
Druh pozemku podľa KÚ:	lesné pozemky
Užíva:	Lesy SR, š.p.

VI.4. Popis miesta plánovaného uskutočnenia kompenzačných opatrení. Výskyt biotopov a druhov a ich stav ochrany, využitie územia pred umiestnením kompenzačných opatrení atď.

Popis miesta plánovaného uskutočnenia kompenzačných opatrení. Výskyt biotopov a druhov a ich stav ochrany (§ 5 ods. 2 zákona), využitie územia pred umiestnením kompenzačných opatrení atď.

Kompenzačné opatrenie 1 - v DÚR Objekt 071

Plocha určená pre realizáciu tohto kompenzačného opatrenia 1 - výsadba nového lesa, je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia. V okolí plochy sa nachádzajú pozostatky lužných lesov (zo západnej

a južnej strany) rôzneho veku a druhového zloženia, či inak povedané ekologickej kvality. Zo severu je ďalšia intenzívne poľnohospodársky využívaná plocha, východná strana je ohraničená cyklotrasou a provostranným priesakovým kanálom vodného diela Gabčíkovo.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 1 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 2 - v DÚR Objekt 072

Plocha vybraná pre realizáciu kompenzačného opatrenia 2 - výsadba nového lesa, je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia podobne ako plocha pre kompenzačné opatrenie 1. V okolí plochy sa zo všetkých strán nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré).

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 2 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 3 - v DÚR Objekt 073

Plocha pre realizáciu kompenzačného opatrenia 3 - výsadba nového, lesa je v súčasnosti intenzívne obhospodarovanou poľnohospodárskou plochou využívanou prevažne na pestovanie obilia tak ako ostatné plochy určené na zalesnenie. V okolí plochy sa zo všetkých strán nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré), z južnej strany je les ohraničujúci plochu pomerne úzky.

5 % plochy patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny, zvyšná časť tejto plochy je už mimo CHKO Dunajské Luhy, platí tu I. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Územie vymedzené pre kompenzačné opatrenie 3 je súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 4 - v DÚR Objekt 074

Realizácia kompenzačného opatrenia 4 - výsadba trávnych porastov, je v súčasnosti obhospodarovanou poľnohospodárskou plochou využívanou striedavo ako trávny porast alebo ako ornú pôdu. Vybraná plocha predstavuje časť z väčšej takto obhospodarovanej plochy , konkrétne sa jedná o jeje juhovýchodnú časť. V okolí plochy (z južnej a východnej strany) sa nachádzajú pozostatky lužných lesov, prevažne staršieho veku (niekoľko desiatok rokov staré) a ostatnú časť ohraničuje poľnohospodárska pôda.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Rovnako táto plocha pre kompenzačné opatrenie 4 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 5 - v DÚR Objekt 075

Plocha pre kompenzačné opatrenie 5 - výsadba trávnych porastov, je v súčasnosti obhospodarovaná poľnohospodárskou plochou využívanou na intenzívne pestovanie rôznych plodín. V okolí plochy (zo západnej a východnej strany) sa nachádzajú pozostatky lužných lesov, ktoré v jej východnej časti zasahuju aj do časti vymedzenej plochy na zatrávnenie. Zo severnej strany ohraničuje plochu poľnohospodárska pôda, z južnej je to prevažne trávny porast v blízkosti ľavostranného priesakového kanála vodného diela Gabčíkovo.

Plocha patrí do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Rovnako táto plocha pre kompenzačné opatrenie 5 je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s náležitou legislatívnou ochranou.

Kompenzačné opatrenie 6 - v DÚR Objekt 076

Samotné Biskupické rameno, resp. jeho pozostatky spolu s plochami určenými pre jeho revitalizáciu a sprietočnenie, sa nachádza v lesných celkoch na ľavom brehu Dunaja. Z hľadiska stavu ochrany toto územie spadá do veľkoplošného chráneného územia CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Ďalej je aj súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s náležitou legislatívnou ochranou.

Samotná vodná plocha sa využíva na rybolov, okolité lesné porasty sú v prevažnej miere podriadené lesnému hospodárstvu čomu zodpovedá aj ich ekologická kvalita, až na niekoľko zachovalých úsekov brehových porastov v okolí Biskupického ramena s relatívne pôvodným druhovým zložením a prirodzeným vývojom.

Malú časť územia vymedzeného pre kompenzačné opatrenie 6 tvoria aj trávne porasty, ktoré sú v okolí umelých hrádzi kosené, inde sú ponechané prirodzenej sukcesii.

Kompenzačné opatrenie 7

Všetky lesné plochy vybrané pre zabezpečenie kompenzačného opatrenia 7 – zvýšenie legislatívnej ochrany vybraných lesných porastov spadajú do CHKO Dunajské Luhy, zóna D – II. stupeň ochrany v zmysle ustanovení zákona č. 543/2002 Z.z. o ochrane prírody a krajiny. Ďalej sú súčasťou CHVÚ Dunajské Luhy s náležitou legislatívnou ochranou a súčasťou ÚEV Biskupické luhy s primeranou legislatívnou ochranou.

Plochy sa dlhodobo využívajú na lesohospodársku činnosť ako lužné porasty. Tu je však potrebné zdôrazniť, že v súčasnosti tvoria posledné zvyšky ako tak pôvodných lužných porastov vysokej ekologickej hodnoty bez významného podielu inváznych druhov rastlín, je teda možné povedať že z hľadiska stavu biotopu sú v priaznivom stave.

Na vybraných lesných plochách sa nachádzajú dva typy lesných biotopov a to Ls1.1 – Vŕbovo-topoľové nížinné lužné lesy (lesný diel č. 470C), druhým typom je Ls1.2 – Dubovo-brestovo-jaseňové nížinné lužné lesy (lesný diel č. 6, 467 I.PS, 467 III.PS, 469 a 470A).

VI.5. Predpokladané výsledky, ako budú navrhované opatrenia kompenzovať negatívne účinky projektu alebo plánu na integritu lokality a ako umožnia zachovať súdržnosť území sústavy chránených území

Projekt kompenzačných opatrení (kompenzačné opatrenie 1 až 3 – výsadba nových lesných porastov) vytvára dostatočné predpoklady na to, aby v súčasnosti fragmentované lesné územie pri mestskej časti Bratislava - Čunovo poskytlo dostatočne vhodné podmienky pre hniezdenie orliaka morského po zalesnení vybraných plôch a scelení fragmentovaných území. Orliak morský v tejto lokalite historicky hniezdil, no jeho hniezdisko antropogénnymi vplyvmi zaniklo, preto po skompaktnení tohto lesného porastu je veľký predpoklad jeho prinavrátenia do tejto oblasti CHVÚ za účelom hniezdenia.

Revitalizácia a sprietočnenie Biskupického ramena (kompenzačné opartrenie 6) nahradí negatívne vplyvy vyvolané výstavbou a prevádzkou diaľnice D4 na biotopy bociana čierneho v CHVÚ Dunajské luhy zlepšením a rozšírením potravných biotopov v území, čo by malo rovnako vplývať pozitívne na jeho populáciu v dotknutej časti CHVÚ.

Vytvorenie trávnych porastov (kompenzačné opatrenie 4 a 5) nahradí negatívne vplyvy pre haju tmavú rozšírením vhodných potravných biotopov pre tento druh. Čo by malo rovnako pozitívne vplývať na udržanie či rozširovanie populácie tohto druhu v celom CHVÚ.

Kompenzačné opatrenie 7 – zvýšenie legislatívnej ochrany existujúcich lesných porastov má za úlohu plniť funkciu vhodného hniezdneho biotopu pre všetky dotknuté druhy do doby, keď novovysadené lesné plochy budú ekologicky schopné plniť funkciu hniezdneho biotopu. Teda je možné povedať že cieľom tohto opatrenia je zachovanie vhodných hniezdnych biotopov v maximálne možnej miere v dotknutom území.

VI.6. Časový harmonogram realizácie kompenzačných opatrení s uvedením informácie o tom, kedy sa očakáva dosiahnutie očakávaných výsledkov

Časový harmonogram realizácie kompenzačných opatrení (vrátane dlhodobej realizácie) s uvedením informácie o tom, kedy sa očakáva dosiahnutie očakávaných výsledkov

Projekt kompenzačných opatrení ako taký, bude po vydaní územného rozhodnutia na všetky jeho časti a vysporiadasní vlastníckych vzťahov predmetom stavebného konania vrátane

získanie všetkých potrebných súhlasov a povolení. Po vydaní stavebného povolenia je potrebné realizovať kompenzačné opatrenia tak, aby aj po začiatku výstavby diaľnice D4 Bratislava, Jarovce – Ivanka sever bola zabezpečená ochrana celkovej koherencie európskej sústavy chránených území.

Očakávané výsledky z realizácie kompenzačných opatrení sa pri výsadbe trávnych porastov, realizácii sprietočnenia Biskupického ramena dostavia prakticky do 1 roka. Efekt zo zvýšenia ochrany na vybraných už existujúccich lesných porastocch sa dostavý prakticky okamžite po ukončení realizácia tohto opatrenia. Pri novovysadených lesných porastoch možno požadované výsledky (plnenie ekologických funkcii) očakávať najskor za 40 rokov od ukončenia výsadby.

Konkrétny harmonogram je súčasťou dokumentu ako samostatná príloha č. 1 Harmonogram realizácie kompenzačných opatrení.

VI.7. Zoznam požadovaných povolení na realizáciu kompenzačných opatrení podľa osobitných predpisov, ak budú potrebné, subjekty zodpovedné za ich získanie a predbežné súhlasy vlastníkov pozemkov na mieste plánovaných kompenzačných opatrení s ich realizáciou

Zoznam požadovaných povolení na realizáciu kompenzačných opatrení podľa osobitných predpisov, ak budú potrebné, subjekty zodpovedné za ich získanie a predbežné súhlasy vlastníkov (správcov, nájomcov) pozemkov na mieste plánovaných kompenzačných opatrení s ich realizáciou

Zoznam požadovaných povolení na realizáciu kompenzačných opatrení

- územné rozhodnutie
- rozhodnutie o zmene využívania územia (trávne plochy, lesné plochy)
- stavebné povolenie

Predbežné súhlasy vlastníkov pozemkov

Podľa platnej legislatívy (Stavebný zákon č. 50/1976 Zb. v platnom znení, § 38a § 108) nie je pre realizáciu kompenzačných opatrení, pre diaľnicu D4 Bratislava, Jarovce – Ivanka sever, potrebné žiadať súhlas vlastníkov pozemkov nakoľko je menovaná stavba verejným záujmom.

VI.8. Náklady a spôsob financovanie navrhovaných kompenzačných opatrení

Cena za realizáciu projektu kompenzačných opatrení je v tomto štádiu projektovej prípravy odhadovaná na 9 692 060,- Euro, zahŕňa ich samotnú realizáciu a následnú starostlivosť o ne. Samotná starostlivosť o novovzniknuté plochy a objekty je vyčíslené na necelých 30 000,- Euro na dobu 10 rokov a predstavuje pri lesných porastoch opakované zalesnenie, ochranu proti zveri, vyžínanie a plecí rub, pri trávnych porastoch je to kosenie, obracanie zhrňovanie suchej trávy, pri mostnom objekte a samotnom Biskupickom ramene (objekty 076 a 077) sa bude jednať o natieranie konštrukcii či iné drobné úpravy.

Náklady na realizáciu projektu kompenzačných opatrení a následnú starostlivosť o ne sú zahrnuté do nákladov na realizáciu stavby diaľnice D4 Bratislava, Jarovce – Ivanka sever, rovnako ako aj náklady za výkup pozemkov nevyhnutných pre ich realizáciu, či náhradu za obmedzenie vlastníckych práv ostatných dotknutých pozemkov.

VI.9. Subjekty zodpovedné za realizáciu kompenzačných opatrení

Za realizáciu projektu kompenzačných opatrení je zodpovedný investor, ktorého zámer si vyžaduje realizáciu takéhoto projektu. V tomto prípade je to NDS, a.s. ako štátna spoločnosť.

VI.10. Plán monitoringu úspešnosti kompenzačných opatrení vrátane návrhu predpokladaných nápravných opatrení s uvedením subjektov zodpovedných za ich realizáciu

Monitoring úspešnosti (funkčnosti) kompenzačných opatrení bude predmetom činnosti ŠOP SR ako štátnej inštitúcie zodpovednej za ochranu prírody, ktorá bude v prípade potreby rozhodovať aj o nápravných opatreniach (ich obsah a rozsah nie je v súčasnosti možné bližšie špecifikovať, ako ani to či vôbec budú potrebné). Za realizáciu prípadných nápravných opatrení bude zodpovedný investor stavby diaľnice D4 Jarovce – Ivanka sever, teda NDS, a.s..

Rozsah samotného monitoringu úspešnosti kompenzačných opatrení je možné zhrnúť do nasledujúcich bodov:

- Monitoring pôsobenia zámeru počas prevádzky diaľnice na populácie vtákov, ktoré sú predmetmi ochrany v CHVÚ Dunajské luhy. Jedná sa o monitoring hustoty výskytu jednotlivých vtáčích druhov do vzdialenosti min. 500 m na obe strany diaľnice. Monitoring by mal začať rok pred výstavbou a pokračovať každoročne až minimálne do 5 roku prevádzky.
- Monitoring stavu kompenzačných opatrení a ich vývoj v čase. Monitoring by mal zachytiť vývoj biotopov a ich postupné preberanie funkcii na ktoré boli realizované. Tento monitoring je potrebné začať realizovať ihneď po realizácii kompenzačných opatrení. Odhadovaná dĺžka trvania je 3 roky pre trávne porasty, 5 rokov pre monitoring funkčnosti prietočného Biskupického ramena, 10 rokov pre novozaložené lesné plochy a 20 rokov pre už existujúce lesné porasty.
- Monitoring využívania plôch kompenzačných opatrení jednotlivými vtáčími druhmi, t. j. sledovanie ich výskytu (populačnej hustoty) a to, za akým účelom využívajú tieto plochy jednotlivé vtáčie druhy, ktoré sú predmetmi ochrany. Frekvencia tohto druhu monitoringu je potrebná každoročne po dobu 5 rokov od ich realizácie, následne každých 5 rokov po dobu ďalších 20 rokov.

Je nutné poznamenať, že monitoring úspešnosti kompenzačných opatrení je v prípade potreby možné modifikovať za účelom zabezpečenie objektívnych a vierohodných výsledkov.

IV.11. Podrobný realizačný projekt kompenzačných opatrení.

Je súčasťou tohto dokumentu ako samostatná príloha č. 2 Podrobný realizačný projekt kompenzačných opatrení.

Vypracovali:

Mgr. Marek Sekerčák	- Odborne spôsobilá osoba podľa zákona č.543/2004 Z.z. - Odborne spôsobilá osoba podľa zákona č.24/2006 Z.z.,
Ing. Adéla Lepková	
Mgr. Adriana Klimeková	

Zodpovedný riešiteľ:

Mgr. Tomáš ŠIKULA	- Odborne spôsobilá osoba podľa zákona č.543/2004 Z.z. - Odborne spôsobilá osoba podľa zákona č.24/2006 Z.z., - Znalec v zozname znalcov podľa zákona č.382/2004 Z.z., odbor: Ochrana životného prostredia, odvetvia: Odhad škôd v životnom prostredí, Ochrana prírody a krajiny

DIAĽNICA D4 BRATISLAVA, JAROVCE – IVANKA SEVER

Návrh kompenzačných opatrení

Dopravné riešenie
- diaľnica D4 Jarovce – Ivanka sever
- pripravovaná rýchlostná cesta R7
- diaľnica D4 (v prevádzke)

Vplyvy
- H – rušenie hlukom
- N – zvýšená návštevnosť lokality
- Z – záber biotopov

Zmierňujúce opatrenia
- protihluková stena
- I – likvidácia inváznych druhov
- P – úprava podmostia

Hranice územia
- katastrálna hranica územia
- štátna hranica SR

NIVY
RUŽINOV
PETRŽALKA
ROVINKA
NOVÉ KOŠARISKÁ
JÁNOŠÍKOVÁ
PODUNAJSKÉ BISKUPICE
KALINKOVO
JAROVCE
RUSOVCE
ČUNOVO

D4
R7
MÚK ROVINKA
MÚK KETELEC
MÚK RUSOVCE
MÚK JAROVCE
ODPOČÍVADLO ROVINKA

s
1 0.5 0 1 km

VYPRACOVALA	DÁTUM	ÚČEL	MIERKA
Mgr. Adriána KLIMEKOVÁ	JÚL 2014	Návrh kompenzačných opatrení	1:40 000

NÁZOV VÝKRESU: **PREHĽADNÁ SITUÁCIA VPLYVOV A ZMIERŇUJÚCICH OPATRENÍ**

ČÍSLO VÝKRESU: **3**

HBH Projekt spol. s r.o.
organizačná zložka Slovensko
Partizánska cesta 97, 974 00 Banská Bystrica

Príloha č. 1:

Harmonogram realizácie kompenzačných opatrení pre diaľnicu D4 Bratislava, Jarovce – Ivanka sever

Okruh prác	Dátum začatia a ukončenia prác
Získanie územného rozhodnutia	10.12.2014
Výkup pozemkov	10.9.2016
Spracovanie projektu pre stavebné povolenie	30.1.2016
Stavebné a iné povolenia	20.12.2016
Verejné obstarávanie realizácie	12/2016
Realizácia	12/2020

NÁRODNÁ
DIAĽNIČNÁ
SPOLOČNOSŤ

ASSOCIATION LEADER DOPRAVOPROJEKT, a.s. *DIVÍZIA BRATISLAVA I* 83203 BRATISLAVA, KOMINÁRSKA 2,4	Č.ZÁK. 7737-00
HEAD OF DIVISION BRATISLAVA 1 Jng. Jozef HARVANČÍK	C.ARCH. 8413

"D4 BRATISLAVA, JAROVCE-RACA" ASSOCIATION

DOPRAVOPROJEKT

R-PROJECT INVEST s.r.o

GC GEOCONSULT

PREPARED BY Mgr. Šárka POKORNÁ	RESP. DESIGNER Mgr. Tomáš ŠIKULA	MAIN PROJECT ENGINEER Ing. Mikuláš JURKOVIČ	
CHECKED BY Mgr. Marek SEKERČÁK	OKRES(OBVOD) STAVBY ^ BRATISLAVA V, BRATISLAVA II, BRATISLAVA III, SENEC		
CUSTOMER NÁRODNÁ DIAĽNICNA SPOLOČNOSŤ, a.s. MLYNSKÉ NIVY 45, 821 09 BRATISLAVA		HBH Projekt spol. s r.o. Kabátníkova **216/5, 602 00** Bmo	
HIGHWAY D4 BRATISLAVA, JAROVCE - IVANKA SEVER		LEVEL zoning permit	FORMAT A4
		DATE 03.2014	ORDER NO 7737-00
		SCALE	SHEET NO 8413
APPROPRIATE ASSESSMENT OF IMPACT OF INTENTION ON TERRITORIES OF EUROPEAN IMPORTANCE AND PROTECTED AVIAN TERRITORIES		DRAWING NO	SET NO

Table of contents

Annexes:

- Photographic documentation
- The comprehensive situation of the assessed variants
- The detailed situation of the intention in the proximity of the CHVÚ Sysľovské polia
- The detailed situation of the intention on the place of crossing the Danube
- Abbreviations:

CHVÚ - the Protected Avian Territory
ÚEV - the Territory of the European Importance
ZOPK - the Act on Nature and Landscape Protection

I. INTRODUCTION

1.1. Assignment

The presented "Appropriate Assessment of the Impact of the Intention on the Territories of European Importance and Protected Avian Territories" (hereinafter referred to as the "Appropriate Assessment" or the "Assessment") within the zoning and planning decision documentation is elaborated on the basis of the request of the investor - NDS, a.s.

1.2. Assessment Objective

The objective of the presented "Natura Assessment" is to verify whether the intention - highway D4 Bratislava, Jarovce - Ivanka North has the significant negative impact on the subjects of the protection and the integrity of the particular locations of the Natura 2000 system.

1.3. Assessment Elaboration Procedure

When elaborating the "Natura Assessment", they proceeded in accordance with the Methodological guide to the stipulations of Articles 6(3) and 6(4) of the Directive on the conservation of natural habitats and of wild fauna and flora No. 92/43/EEC.
Furthermore, they proceeded in accordance with the experience of the authors, while considering the methodological procedures used in the Czech Republic (the Methodology of the Assessment of the Significance of Impact in the Assessment pursuant to Article 45i of the Act No. 11č/1992 Coll. on Nature and Landscape Protection as Amended" (the Journal of the MZP ČR, year XVII, part 11, November 2007' - hereinafter referred to as the Methodology of the Czech Republic.
When processing the "Natura Assessment", they came from the field surveys carried out within the "Natura Assessment" itself (March - September 2013' as well as within the elaboration of the Project of Compensation Measures (HBH Projekt, September 2013). They used also the surveys carried out in the previous stages of project preparation (in particular the EIA Report and Biota Monitoring'. The questions of fish and bats were consulted with experts: Ing. Peter Beleš (slovak Fishing Union), RNDr. Peter Bačkor, PhD. (Society for Bat Protection in Slovakia
Two variants were assessed, to the same extent. Variant 0 preserves the status quo and from the point of view of the assessment of the impact on Natura 2000 system, it is not possible to assess it in a standard way in this particular case. From the point of view of the impacts on CHVÚ and ÚEV we just may state that in the case of the application of Variant 0 (so called the implementation of no active variant), there would be no impacts identified in the presented assessment, for all identifiable impacts the Variant 0 would be given grade 0 (i.e. no impact).

The presented Natura assessment is compiled in such a way it would meet the Methodical Requirements and it comprises the following data:

- *Introduction - Assignment, Objective and Procedure of the Assessment.*
- *Data on the Intention - Basic Data, Data on Inputs and Data on Outputs.*
- Data on ÚEV and CHVÚ - Identification of Concerned Locations (locations in a direct contact and locations affected in relation to inputs or outputs); Description of the Concerned Locations and The Concerned Subjects of Protection.
- The Assessment of the Impact of the Intention on ÚEV and CHVÚ - The Assessment of Base Information Completeness, Possible Impacts of the Intention, The Assessment of the Impact of the Intention on the Concerned Subjects of Protection (including the conclusion regarding the influence of the given subject or protection; the assessment of the impact of the intention on the integrity of the locations, the assessment of cumulative impacts).

- Conclusion - the introduction of resulting assessment, in the case of several assessed variants also their comparison
- Annexes - maps or other annexes.

II. DATA ON THE INTENTION

II.1. Basic Data

1. Intention Name:

Highway D4 Bratislava, Jarovce – Ivanka North

2. Purpose:

The highway D4 represents the transport interconnection of the existing highway routes D1 and D2 in South, East and North part of the capital city of the Slovak Republic, Bratislava. The considered territory is very complicated also from the point of view of transport relations and bonds within the region of "Greater Bratislava" with regards to rapid development of the catchment territory and constantly changing activities and functions in this extraordinary attractive territory where the determination of transport requirements and connections to the existing communication system is really decisive. In addition to the D2 and D1 highway linking D4 will be a major international interconnection between Slovakia and Austria with transport links to Hungary and the Czech Republic.

3. Intention Location:

Region: Bratislava

Municipalities: Bratislava, capital city of the Slovak Republic, Bratislava - Jarovce municipal district, Bratislava – municipal district Rusovce, Bratislava - Podunajské Biskupice municipal district, Bratislava - Vajnory municipal district, Most pri Bratislave, Zálesie, Ivanka pri Dunaji

4. The Description of Technical and Technological Solution of the Intention:

The detailed description of the variants is stated in the zoning and planning documentation (Variant 1 - red) and in the Feasibility Study (Variant 2 - green).

5. The Variants of Proposed Activity:

2 active variants, stated bellow, shall be assessed within this assessment: *28/09/2011Variant*

1 – Red:

Recommended by the Final Opinion from the EIA process issued by the Ministry of Environment of the Slovak Republic (No. 318/2010-3.č/ml) on 28 September 2é11 (as the combination of variant "E" - green and variant "C" - red), further processed within the zoning and planning decision documentation.

The highway D4 is projected in the entire concerned section for the design speed of vn=120 km/hour with the following width arrangement:

- D 26.5 in the section of Jarovce intersection - Rusovce intersection,
- D 33.5[1] in the section of Rusovce interchange - Ketelec interchange,
- D 33.5 in the section of Ketelec intersection -Rovinka intersection,
- D 33.5 in the section of Rovinka intersection -Ivanka West intersection,
- D 26.5 + collectors in the section of Ivanka West intersection - Ivanka North.

[1] In category D 33.5 with four lanes and space in the middle separating lane, i.e. with a wider middle separating lane providing for a potential extension to 6 lanes in the direction to the axis of the D4 highway. The structure of the bridge over the Danube and the adjacent forests will not be extended when rebuilding the road to 6 lanes. Instead, space reserve in the middle separating lane and on the sides of the road will be used.

The beginning of the section is in the GSI Jarovce and it continues almost at the level of terrain to the railway route of Bratislava - Rusovce that is intersected by the highway in grade separated way (a bridge with the height of ca 13 m). Behind the GSI Rusovce, the route enters the location of Natura 2000 system, passing it on the bridge system having the length of ca 3.000 km. The jetty runs through the branches and artificially built channels as well as the main course of the Danube River. The route leaves the territory of Natura 2000 system at km 5.320.
The level line of the bridges from GSI Rusovce raises above the main stream of the Danube River (km 4.028), where it reaches the maximum height above terrain (clear height of 26.5 m from the river bottom). From this point, the level line drops down to km 6.000, where it is again at the level of the terrain.
The passing height of the bridge above the right-side seepage channel is approx. 8.8 metres, and approx. 9 metres above the Jarovecké arm. The passable height under the bridge at the Danube River is 16.85 m (minimum passable height is 10m) and it is 14.75 m for canoeing and rowing track (minimum passable height of 4m). The bridge over the left-side bay has a passing height of 17 m, and 15.5 metres over the left-side seepage channel. The bridges in the inundated forest stands on the left bank shall have the clear height from 14.7 m (the passage through Biskupice branch) to 5.5 m on the place of leaving the locations of Natura 2000 system (km 5.320).
The width o the carrying structure of the bridge above the rowing and canoeing track and the Danube River shall be 41.70 m (for the entire width of the highway and adjacent pathways). The bridge object shall lead the highway D4 of category D 26.5/120 above the Jarovce branch, canoeing and rowing track and the Danube River. There shall be a path for pedestrians and cyclists at both sides of the bridge having the width of 3.0 m and a service pathway having the width of 0,75 m.
Alongside the entire flyover bridge (the entire length of the passage through the location of Natura 2000 system), there are walls having the height of 4 m designed at both sides, they should minimise the spreading of noise and light to the surrounding area and they shall also considerably reduce the risk of the collision of vehicles with birds and bats.
The part of the intention is also the connection of cycling routes lead at the right-side and left-side embankment of the waterworks Gabčíkovo through the flyover bridge above the Danube River.
V The cycling route/servicing communication leading under the bridge on D4 in forest stands behind the left-side infiltration channel was added to the project at the stage of zoning and planning decision documentation. It serves for the connection of the cycling route on the bridge on D4 through the Danube River to the cycling route running on the left-side embankment. The communication having the width of 6 m should have the asphalt surface and it should serve for cyclists and in-line skaters.
The highway D4 then continues on the left bank of the Danube River to the South of the area of gravel mining in Ketelec, where grade separated intersection with the planned expressway R7 shall be located. The route of highway D4 in comparison with the original route (assessed in the EIA) in accordance with the recommendations in the Final Opinion of the Ministry of Environment of the Slovak Republic for R7 Bratislava - Dunajská Lužná, is shifted in the GSI "Ketelec" by ca 235 m more to the North. At km 9.250, a large bilateral resting place of "Rovinka" is designed. The route of highway D4 at km 10.884 intersects the road I/63 by grade separated intersection. At km 11.750, GSI Rovinka with the road I/63 is designed. The highway further continues over the railway route of Bratislava - Dunajská Streda, to the North of the village of Most pri Bratislava, where it should intersect the new prospective expressway Bratislava - Vlčkovce (according to the intentions of NDS a.s.) and the road II/572 through grade separated intersection in future. The interconnection of both roads with highway D4 shall be in one GSI "Most pri Bratislava" by means of collector lanes. The route of highway D4 further continues before taking-off and landing track of RWY 13-31 of the Airport of M.R. Štefánik and it intersects the Little Danube River by a bridge. Here, the highway D4 runs in a notch so that it would respect the protected zones of the elongated track of RWY 13-31 of the airport. The highway D4 further runs on a bridge above the future water area of gravel pit Zelená voda, it

continues to the East of the area of former agricultural cooperative in the location of Pruská sihoť (farther from the airport). On the place of intersection with the planned taking-off and landing track 13L-31R of the Airport of M.R. Štefánik, the highway is lead in a notch with ca 7m depth, so that it would be possible to complete the coverage of the highway in the form of "Zálesie" tunnel in future. The route of highway D4 further continues in a low fill at the right bank of Šúr channel, while respecting its protected zone, it intersects the road I/61, the prospective communication between the municipal part of Tanieriky and Šakoň with grade separated intersection.
With grade separated intersection it intersects the railway route of Bratislava - Galanta and ends on the place of the connection of the highway D1 on the place of GSI Ivanka - North.

The total length of the designed section of highway D4 is 22.590 07 km.

Variant 2 – Green:
V It was assessed in the EIA process as variant "C" - red.
From the point of view of the impacts on Natura 2000 system, variant 2 differs from variant 1 just in the method of the execution of the intention through the Danube, thus approximately from km 1.500 to ca km 8.000, where both variants again get to the identical corridor. Variant 2 (green) passes through the Danube using the method mentioned in the Feasibility Stud (Dopravprojekt Bratislava, 2009) and assessed in the EIA Report (Geoconsult, 2010), i.e. ca by 650 m more to the South than variant 1 (red). Variant 2 overcomes the Danube River and the adjacent inundated forests also on a bridge. The system of bridges in the case of variant 2 terminates ca 172 m prior to the outskirts of the CHVÚ Dunajské luhy, or 80 m before the boundary of the ÚEV Biskupické luhy. Thus the intention in this variant does not pass through the territory o Natura 2000 system entirely on the bridges. The part of the intention is also the transport connection of left-side cycling route to the flyover bridge above the Danube River, the concrete design has not been specified yet.
The anti-noise and anti-glare walls on the place of the passage through Natura 2000 system (ca km 3.000 - 5.700) are designed alongside the entire length of the passage through the locations of Natura 2000 system (to the right km 2.900 - 7.500; to the left km 2.900 - 5.800) . However, the height is just 2 m above the road.

The variants get to the identical route approximately on the place where Ketelec intersection is planned (the intersection of D4 with expressway R7). Both variants run in the same corridor from the connection to the end of the structure, i.e. as far as Ivanka North intersection. The total length of the designed section of highway D4 is 22.800 63 km.

6. The supposed date of the commencement of the implementation of the intention and its completion:

- Construction commencement: 2016
- Construction completion: 2019

7. Possible cross-border impacts:
The EIA process that was terminated (the Final Opinion, No. 318/2010-3.4/ml) was not run in the regime of international assessment, i.e. the possible cross-border impacts were not supposed and identified.

II.2. ***Data on the Inputs***

II.2.1. Soil

The overall seizure in the individual variants and the seizure related to Natura 2000 system (i.e. the seizure within the CHVU Dunajské luhy and ÚEV Biskupické luhy) is stated in the following table.

Table 1: The preliminary estimate of the overall permanent land seizure and the seizure within Natura 2000 system

Variant	In total	CHVÚ Dunajské luhy	ÚEV Biskupické luhy
1 - red	208.5 ha	11.13 ha (0.067 % CHVÚ)	3.16 ha (0.3 4 % ÚEV)
2 - green	143.1 ha	12.77 ha (0.080 % CHVÚ)	3.96 ha (0.46 % ÚEV)

As it is clear from the table, from the point of view of the original seizure within the CHVÚ Dunajské luhy and the ÚEV Biskupické luhy, the variants 1 and 2 are approximately comparable. Variant 1 represents just a little less land seizure within Natura 2000 system than variant 2.

11.2.2. Water

During the construction period water for drinking and hygienic purposes shall be necessary, as well as water for construction technologies and machinery.
According to the Regulation No. 648/2006 Coll. as amended, in particular of Annex 1, it is necessary to consider the consumption of water for drinking purposes at the amount of 5 l/person/shift and the indirect needs (washing and taking a shower) at the amount of 120 l/person/shift. The maximum hourly water consumption per one person shall be determined as 50% of indirect consumption, which is 60 l/hour. The annual sum of water consumption (240 working days) makes 30 m per one employee. The accurate number of employee shall be known only during the implementation of the intention, however we may say even now the daily and annual water consumption of drinking water shall be inconsiderable from the point of view of capacity in the concerned territory.
Water for construction technologies and machinery shall be used for the production of concrete mixtures, spraying of the construction site and machinery maintenance (700 l per one washing of a lorry). Water from public water supply system, nearby water courses shall be used, while it shall be possible to build own water supply sources with regards to favourable hydrogeological conditions. The quantity of consumed water during the construction is assessed at the amount of several hundreds of m3 a year. In total, the consumption of water for the above name purposes is assessed to be several tenths of litres per second. From the point of view of water volume and its availability in the territory, the quantity is less significant from capacity point of view.
V Nowadays, they do not suppose the consumption of water from surface or ground sources that would be more significant from capacity point of view and could notably affect Natura 2000 system.
The proposed transport structure does not represent a significant load for environment by water consumption.

V During the operation period, water shall be used for the maintenance of roads, the treatment of greenery and machines, the operation of highway resting place. The source shall be again the local water supply systems and adjacent water courses. The consumption of water for the maintenance of roads and surrounding greener shall be irregular (according to need) and it is assessed to be several tanks a year. They would use up to thousand m3 per year for mechanisation maintenance. In total, it would be the insignificant quantity for the entire territory.

11.2.3. Raw materials

During the construction, there would be the demands after raw materials, corresponding to the character of the structure. This is mainly the filling material of the earth body, gravel, crushed rocks for concrete structures and asphalt mixtures, the material for road covers (oil asphalts and modification admixtures, special road cement), steel, fuel, oils and lubricants for construction mechanisms and transport machinery.
For the balance coverage of the usable earth for road fills, that are missing or replace the unusable earth from excavations, it is possible to use gravel located and mined in the nearby deposits of Podunajské Biskupice (in the case of permit for depth mining of gravel or the prolongation of the validity of contemporary surface mining), Kalinkovo, Nové Košariská or Rovinka.
During the operation it shall be necessary to consider the consumption of fuel and lubricants for maintenance mechanisms. The consumption of approximately 3 tons is supposed for one machine and year in the case of four-lane road. The quantity of material necessary for repair and maintenance (concrete, road barriers, paints, etc.) shall be determined by the scope of implementation.
Furthermore, it shall be necessary to include also the grit in the consumption of row material, namely chemical grit material (NaCl, CaCl2, MgCl2) at the quantity of ca 1.2 kg/m for 60-70 intervention days a year. In the case of the use of inert material, its consumption on level sections for the same number of intervention days shall be ca 10.5 kg/m per year

II.2.4. Traffic Infrastructure Requirements

In the stage of highway construction, there shall be an increased transport demand on road communications in relation to the need of supplying the construction with raw materials. Access to the construction site as well as to individual buildings during construction will be secured by existing roads and roads that will be adapted after completion of the construction, respectively if necessary even before the start of use.

II. ***3. Data on Outputs***

II.3.1. Air

Period of Construction

During the implementation, the assessed intention shall act as a specific area source of the pollution of ground-level layer of atmosphere (dust, exhaust gases from heavy construction mechanisms) in the proximity of construction yards, or on the places of greater concentration of construction works (e.g. around the bridge objects). From the type of emissions aspect, in this period, dust from ground works will be dominant while emissions of exhaust gases from construction mechanisms will form only a smaller part. While it is impossible to estimate the quantity of emitted substances more precisely for the construction period , it can be stated that the quantity of emission significant from the viewpoint of protection of ecosystems (especially NOx) specific for the period will be, considering the expected period of construction (approx. 4-5 years) insignificant compared to both the current and the subsequent period of operation.

Operation Period

V During operation, the proposed activity will be a line source of air pollution, especially by gaseous exhalates. These will be unavoidably accompanied by aerosols with various structures originating from the chemicals used to maintain the road driveable in winter, and, in small quantities, also substances immediately related to automobile operation (tire wear, etc.). The main representatives of pollutants emitted during operation of road motor vehicles are *carbon monoxide (CO), nitrogen oxides (NO_x), nitrogen dioxide (NO_2), suspended particles (PM_{10}), benzene (C_6H_6,)* a *benzo(a)pyrene ($C_{20}H_{12}$)*; from the viewpoint of protection of ecosystems, under „standard“ operating conditions, the most significant are emissions of NO_x[2], for which under Regulation no.

[2] Nitrogen oxides - NO and NO2; under Annex 1 to Act no. 137/2010 Coll., 0n air as amended, nitrogen oxides mean the sum of nitrogen monoxide and nitrogen dioxide in a unit of volue of air expressed as

360/2010 Coll. on Quality of air as amended sets an absorbed emission limit of 30 //g/m /year (arithmetic average for a calendar year; this limit is defined directly for ecosystem protection).

A current problem for the vegetation is also the ground ozone (O3) with limits generally exceeding in most of the territory of Europe. In the past 20 years, Europe has massively (by approx. 40%) reduced the emissions of ozone precursors (NOx, NMVOC, CO) without a corresponding reaction in the quantity of ground ozone. Studies clearly document the effect of large-scale processes (transfers for high distances, vertical exchange, ozone-climate relationship and others) when forming the local levels of ground ozone. This documents long-distance transfers of these precursors from non-European territories. For protection of vegetation, ground ozone is defined as the index AOT40.[3]. As stated above, its target value (18 000 μg.m–3.h) is normally exceeded both in the assessed territory and in the rest of Europe.

To identify the total status of pollutants after starting the intention, it is necessary to know the current background pollution by individual pollutants to which the expected contribution of the intention has to be added. These data are evaluated for each year by the Slovak Hydrometeorological Institute and are published in an almanac. Under this data, in 2010, the background pollution by NOx in the area ranged between 11-20 [j,g.m'3.year'1. The AOT40 average for vegetation for years 2007 - 2011 was 22 198 μg.m–3.h in the nearest measurement station in Topoľníky. The average AOT40 values in μg.m–3.h for a period of five years for protection of vegetation, corrected for the missing period, is between 18 000 - 21 000 μg.m–3.h for the assessed territory.

Variant 1

For the purposes of preparing of the DUR, an Absorbed Emission Study was prepared (Dopravoprojekt Bratislava, 2013); this is attached as Annex F.8 of the DUR.

The theoretical calculation of the average annual quantity of pollutants was prepared for a condition with the D4 highway in the period 10 years after start of operation. Average climate conditions have been considered.

The NOx contribution to the air from the operation of the intention is calculated in the study in the locations when the intention crosses Natura 2000 territories (ÚEV Biskupické luhy and CHVU Dunajské luhy) to be 2-3 [j,g.m'3.year'1. This implies that even after adding the current background pollution the limit of pollution of ecosystems of 30 [j,g.m'3.year'1 will not be exceeded in the territory.

Variant 2

For the EIA Report, a Distribution Study (Pirman, 2010) has been made, evaluating the contributions of main pollutants of the investment (NOx - lh) to the environment. Hourly NOx concentrations are suitable for an evaluation of the impact on human health, for assessment of impact on ecosystems, however, valid law defined absorbed emission limits for an annual NOx average. This is why it was impossible to use the study to assess this variant.

However, as Variants 1 and 2 do not differ in expected traffic intensity or in differing locations and the intention will be led over the territory with European significance and protected avian area on bridges, one can expect similar final concentrations of NOx as in Variant 1

(2-3 μg.m-3.year -1 in a distance of up to 150 m from the intention). A slight growth of concentrations compared to Variant 1 will be invoked by non-existence of the noise wall when Variant 2 crosses left-bank forests; however, the limit for ecosystem protection cannot be exceeded.

II.3.2. Waste water

Period of Construction

V In this period, waste waters will be formed mostly from social facilities at the construction site. These will mostly be sanitary waste waters. The regime of creation and treatment thereof will be

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nitrogen dioxide in micrograms per cubic metre (mikrog/m3).

[3] AOT40 is the sum of exceedings of the level of 80 |ig.m 3 from 1-hour concentrations during a day (from 08:00 to 20:00 Central European Time) from 1 May to 31 July. The target value is 18 000 ng.nT3.h in a 5-year average.

standard. The quantity of the created sanitary waste waters will depend on the project of construction organization and on the progress of completion. If usual standards and procedures are observed, this quantity will never be significant from the viewpoint of impact on environment and/or the Natura 2000 system.

During the construction of the highway, surface waters of water flows may be polluted when building bridges, indirectly via contaminated geological environment and subsurface water, especially in emergency leakages of fuels and lubricants from motor vehicles and work mechanisms. During the construction of the highway, it is therefore necessary to provide for regular checking of the condition of mechanisms and motor vehicles and for their regular maintenance. With regard to the hydrological and hydrogeological characteristics of the territory, it is necessary to adhere to maximum technological discipline in practically all construction works in the affected territory. Polluted technological water must not be released to surface waters nor to soil. During the construction, it will naturally be necessary to adhere to the emergency plan and all valid provisions of law.

Operation Period

During the operation period, in particular rain waste water shall be generated. Water, running form the surface of the road shall comprise contaminants that shall have an impact on the quality of surface water. This may include especially toxic trace elements (especially aluminium, zinc, nickel, chrome, lead, cadmium, and copper), oil substances (non-polar extractable substances - NEL[4]), PAU[5] and surface treatment materials from winter road treatment (especially NaCl and additives such as anti-clotting additives).

Variant 1

V The currently valid regulations in environmental protection, especially surface and subsurface waters, classify rain waters from roads as waste waters that need to be cleaned prior to leading to a recipient. This is why road sewage with DN 300 to DN 600 will be built alongside the entire proposed road, receiving rainwater from the road by a system of road inlets.

Depending on the terrain configuration and design on the D4 highway in the section crossing and passing by Natura 2000 locations (km 0.000 - 5.500). the road sewage is divided into 3 sections that are led to adjacent recipients after cleaning in oil traps:

- section no. 1 (km 0.000 - 2.000 of the intention), by pushing to the existing retention tanks installed in the Jarovce interchange
- section no. 2 (km 2.130 - 4.000 of the intention), by gravity to the retention-seeping rain tank no. 1 located at the Rusovce interchange
- section no. 3 (km 4.000 - 5.500 of the intention), by gravity to the retention-seeping rain tanks no. 3 and 4, located in km 5.675 left and 5.750 right of the D4 highway.

For the sewage section no. 2 (sewers C and D), the retention-seeping rain tank no. 1 has been designed as a ground type of tank, a so-called dry polder with a depth of approx. 2.5-3 m. The accumulation depth of water is approx. 1 - 1.5 m. The surface of the water has an area of approx. 7000 m^2, the accumulation volume is approximately 7000 to 10500 m^3 of water.

Retention and seeping rain tanks no. 3 and no. 4 (section no. 3) are pushed to the D4 highway in

[4] NEL – non-polar extractable substances; these may originate from oil products, coal and coal products, plant, animal, microorganism products, etc. In relation to transportation, NEL are most frequently seen as oil products defined as hydrocarbons and their mixtures, mostly petrol, diesel oil, benzene and its derivatives, kerosene, heading oil and picamar.

[5] Polycyclic aromatic hydrocarbons. Their sources include wear from asphalt, tires and brakes, as well as small particles originating from combustion engines. Water flowing from roads includes mostly suspensions with polyaromatic substances with higher molecular weight, causing subsequent accumulation in sediments. In surface water, PAU with three aromatic cycles prevail, while in sediments, PAU with 4 cycles prevail.

km 5.675 left and 5.750 right. The depth of reservoirs is ca 2M, which is also the real accumulation depth 23 of water. The water surface area is around 1400 m, the accumulation volume is around 2600 m of water.
The entire sewage system consists of a road inlet and connection, sewage pipeline, sewage shafts, oil traps (with cleaning levels up to 0.1 mg/l NEL on output).
The waste water from the rest of the structure (5.500 - 22.590) will be removed using a system without sewage and oil traps. This will be a system of seeping ditches and lakes in which plants will be used for root cleaning of waste waters. Lakes will be isolated by a clay layer that will require replacement once in every 15 - 20 years. This method is used mostly in areas where it is a problem to lead the sewage into a recipient.

Variant 2
In variant 2, rain sewage is designed to de-water the entire D4 highway; this sewage will be in the middle separating lane and will receive all rain water falling on reinforced surfaces. Rain water from the branches of the proposed sewage will be led through oil traps to a nearby recipient or to a seeping point. For Šúrsky channel, it will need to adjust the amount of water discharged which is limited to it. Therefore the discharged rainwater will be retained in the retention tanks (RT), and further discharged through the flow control valve with the amount determined by the administrator of the flow.
The following recipients are considered for individual sections of the intention:
- Highway section from the Jarovce interchange until km 0.800 to the seepage devices
- Highway section from km 0.800 to 2.200 (bridge) through a pumping pipeline into the Jarovské Danube arm
- Highway section bridge - km 6.000 through a pumping pipeline into the Danube
- Highway section from km 6.000 to 14.100 into seepage devices
- Highway section from km 14.100 to 19.100 through a pumping pipeline into the Little Danube
- Highway section from km 19.100 to 22.800 through a pumping pipeline into the Šúrsky channel
- Drainage of right and left parking area through ORL to seepage devices is individually designed.

The calculated quantity of waters derived from the road for individual variants is shown in the following table:

Table 2: Quantity of water drained from the road

	Volume of rain waters (m3/year)	*of that, in winter period Oct-Mar (some 38%)*
Variant 1 - Red	590 936	224 555
Variant 2 - Green	405 578	154 119

11.3.3. Waste

Construction and operation period
For the construction period, a waste treatment project will be made in the following degrees of project preparation, respecting valid law so that environment is not endangered. A similar procedure will apply to the operating period - waste generated (waste from cleaning of sewages and rain inlets, cleaning of retention tanks and oil traps, removal of pollution of road, etc.) will be treated in the standard manner in line with the valid law.

11.3.4. Noise and light disturbance

The acceptability of noise and light conditions must be monitored, from the viewpoint of object of protection, especially due to the risk of excessive disturbance of habitats used by the animals, potentially causing them to leave the habitats if the disturbance exceeds the bearable level.
According to Rejnen et al. (1995), this noise level differs for various bird species, however, averages between 40 and 50 dB, both for forest bird species and for the birds living in open sites. Therefore the values will be considered as relevant (for the determination of significantly affected

territory).

Period of Construction

The noise disturbance and potential light disturbance levels during the construction will depend on the schedule of works that will only be known in later phases of project documentation. Already now, it can be stated that a vast majority of construction works will be done during the day (i.e. minimum light disturbance) and the intensity of noise disturbance will only reach a fraction of the noise disturbance during the period of operation.

Period of

operation

Variant 1

The intention is mostly located on flat territory on the surface or on a slight filling.

The Danube River, its channels and adjacent floodplain forests included in the Natura 2000 system are crossed by a system of bridges. Along the entire length of the bridges (crossing of the Danube and transition through floodplain forests), the intention has bilateral walls with height sufficient also for most trucks (4 m).

For the zoning permit purposes, a Noise study (Annex F.7) has been prepared, evaluating the noise load from the intention in variant 1.

The study shows that 50 dB equal loudness contours for the intention with noise walls are located in the protected water territories and territories of European significance in a distance of 500 m to 1 km during the day for year 2030. At night, the 45 dB equal loudness line is in a distance of 500 m to 1 km from the axis of the intention. Large distances (1 km for 50 and/or 45 dB) were only calculated in the area of Jarovecké Danube arm where noise is combined with the noise from the Rusovce interchange. In the location of crossing of the Danube and in left-bank forests, the distances are 500 m (45 dB/night) and 500 m (50 dB/day). To reduce noise immediately under the bridge structure, silent elongation closings will be used for the construction of bridges.

The distance of the 50 dB equal loudness contour around the Sysľovské polia protected avian area is also around 500 m from the axis of the intention.

Light disturbance will be produced mostly by vehicles driving on the intention. In the locations crossing Natura 2000 sites (bridging of the Danube, adjacent floodplain forests), the influence will partially be reduced by noise walls. Certain parts of the intention (especially multi-level interchanges) will probably by lighted by lamps.

Variant 2

The intention is mostly located on flat territory on the surface or on a slight filling.

The Danube River, its channels and adjacent floodplain forests included in the Natura 2000 system are crossed on high bridges. In the location of crossing of the Danube (crossing a Natura 2000 territory), the intention has a bilateral noise reducing wall with a height of 2 m, prolonged to locations outside the Natura 2000 site.

For the EIA report purposes, a Noise study (Hujo, 2010) has been prepared, evaluating the noise load from the intention in variant 2. This noise study did not consider the existence of the Rusovce interchange as it became a part of the project later.

The study shows that 50 dB equal loudness contours for the intention in variant 2 without noise walls are located in the protected water territories and territories of European significance in a distance of 700 m to 800 m during the non-vegetation period for year 2040 (daytime).

The distance of the 50 dB equal loudness contour around the Sysľovské polia protected avian area is around 500 m from the axis of the intention.

Light disturbance will be produced mostly by vehicles driving on the intention. The influence will partially be reduced by noise reduction walls with a height of 2 m in the locations crossing Natura 2000 sites.

II.3.5. Radiation and Vibrations

Construction and operation period
During the construction and operation of the highway no production of radiation or other physical fields is expected. Local production of heat and smell is probably in the locations of construction yards, during asphalt-laying works, etc.

III. DATA ABOUT TERRITORIES WITH EUROPEAN SIGNIFICANCE AND PROTECTED AVIAN TERRITORIES

III.1. Identification of affected locations

On the basis of the identified inputs and outputs of the intention, on the basis of the location of the intention in the territory and on the basis of further substantial characteristics of the territory, the following Territories of European Importance (hereinafter referred to as the "EÚV" as well) and the Protected Avian Territories (hereinafter referred to as the "CHVÚ" as well) were selected as the concerned ones:

CHVU Dunajské luhy (SKCHVU007)
Both variants of the evaluated intention directly intervene with the CHVÚ Dunajské luhy.

Variant	CHVÚ Dunajské luhy
1 - red	11.13 ha (0.067 % CHVÚ)
2 - green	12.77 ha (0.080 % CHVÚ)

Preliminarily identified options of influencing of the protected object: taking of suitable habitats, noise and light disturbance, disturbance by increased movement of persons, especially on the left-bank bike track, collisions with vehicles, pollution of environment (polluted waters flowing from the road into water recipients, accidents).

ÚEV Biskupické luhy (SKUEV0295)
Both variants of the evaluated intention directly intervene with the ÚEV Biskupické luhy.

Table 4.: Size of territory taken by individual variants in relation to the ÚEV Biskupické luhy

Variant	ÚEV Biskupické luhy
1 - red	3.16 ha (0.3 4 % ÚEV)
2 - green	3.96 ha (0.46 % ÚEV)

Preliminarily identified options of influencing of the protected object: taking of suitable habitats, noise and light disturbance, disturbance by increased movement of persons, especially on the left-bank bike track, collisions with vehicles, pollution of environment (polluted waters flowing from the road into water recipients, accidents).

CHVÚ Sysľovské polia (SKCHVU029)
None of the variants directly intervene with the CHVÚ. However, the northern part of the CHVÚ is

located in immediate vicinity of the Jarovce interchange where the evaluated intention begins (approx. 240 m). The northern border of CHVÚ Sysľovské polia is already lined by the E58 highway to Austria.
Preliminarily identified options of influencing of the protected object: collisions with vehicles, disturbance, pollution of environment.

ÚEV Ostrovné lúčky (SKUEV0269)

None of the variants directly intervene with the ÚEV. In variant 2, the intention reaches close vicinity of the northern border of the ÚEV (approx. 140 m). Variant 1 is approx. 822 meters distance in the closest point.
Preliminarily identified options of influencing of the protected object: collisions with vehicles, disturbance, pollution of environment.

CHVÚ Lesser Carpathians (SKCHVU014)
None of the variants directly intervene with the CHVÚ. The nearest part of the CHVÚ is located some 4.5 km from the Ivanka - North interchange.
Preliminarily identified options of influencing of the protected object: collisions with vehicles

ÚEV Bratislavské luhy (SKUEV0064)
None of the variants directly intervene with the ÚEV. Variant 1 passes by the location from the south in a distance of approx. 2 km, variant 2 in a distance of approx. 2.8 km, also from the south.
The protected objects in the ÚEV can be influenced by a single impact only - collisions with vehicles on the intention.
Preliminarily identified options of influencing of the protected object: collisions with vehicles

V Other ÚEV and CHVÚ are located in wider surroundings of the intention; however, these were evaluated as not influenced by the intention and thus were not included in the assessment. The reason is mainly the distance of the locations from the intention related to the subjects of protection, for which the locations of Natura 2000 system were declared and the size of their territories (thus the consideration of the chance of occurrence of the subject of protection in the proximity of the intention, or other type of impact by the intention).
This applies to the following locations:

- ÚEV Hrušov (SKUEV0270). The protected object here is the water habitat 3150 and various species of fish, mollusc, European fire-bellied toad, stag beetle, Mehelyi's root vole, and European beaver , the shortest distance from variant 1 to the location is approx. 2.25 km, from variant 2 it is approx. 1.53 km.
  This location was removed from the Assessment due to its distance from the intention and especially due to the method of crossing the Danube and adjacent floodplain forests on a bridge. Considering the quantity of water in the water flow, the impact to the water flow will be minimum; any significant turbiding of water during the construction of the pillars or barrier effects of the intention with regard to the protected objects in this ÚEC can be excluded.
- ÚEV Šúr (SKUEV0279). The protected objects include 4 habitats, 1 plan, 4 representatives of insects, 2 amphibian species, Mehelyi's root vole, and European beaver. The shortest distance from the location (Ivanka - North interchange) is 1.8 km.
  This location was excluded from the Assessment due to its distance from the intention with regard to ecological requirements of individual protected objects.
- ÚEV Homoľské Karpaty (SKUEV0104). The protected objects include 14 habitats, 8 representatives of insects, European fire-bellied toad, stone crayfish, and 6 species of bats. The shortest distance from the location (Ivanka - North interchange) is 5 km.
  This location was excluded from the Assessment due to its distance from the intention with regard to ecological requirements of individual protected objects. In the section closest to the ÚEV, the intention is mostly in agricultural land, crossing practically no line elements

of the country and no forests. In several critical locations of the intention, there were

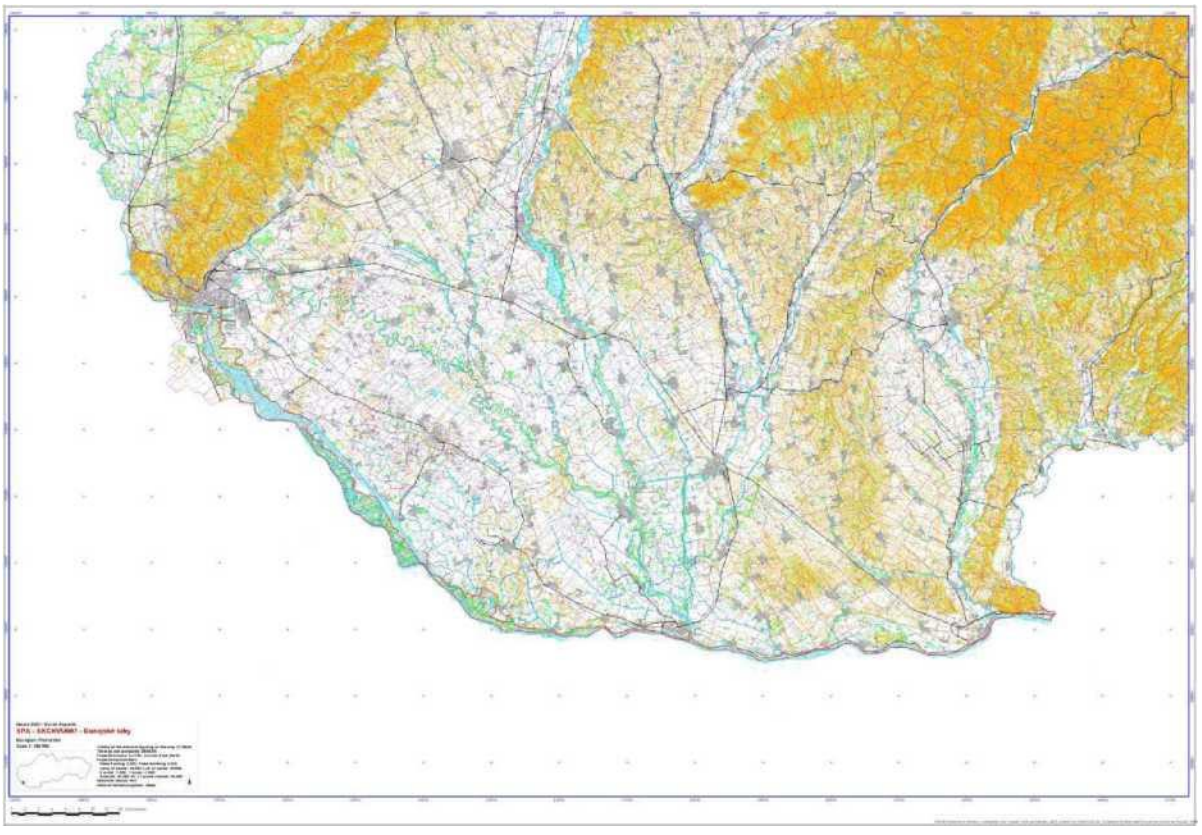
Appropriate assessment of impact of intention on territories of European importance and protected avian territories

in addition, during the assessment, proposed measures eliminating risk of collisions with flying animals (see Chapter V).

III.2. *Description of affected locations and affected objects of protection*

This chapter describes the locations of the Natura 2000 system affected by the intention and their objects of protection. Basing on the foreseen influences of the intention, presence of protected objects and their ecological requirements, objects of protection that may be influenced by the intention and will be subject to further evaluation are identified in here. Other protected objects have been excluded as non-influenced.

III.2.1. CHVÚ Dunajské luhy



Characteristics of protected avian territory

The Dunajské luhy protected avian territory was declared by a regulation of the Ministry of Environment of the Slovak Republic no. 440/2008 Coll. as amended, with an aread of 16 511.58 ha, located in the territory of districts Bratislava II, Bratislava IV, Bratislava V, Senec, Dunajská Streda, Komárno, and Nové Zámky.

The territory is represented by the main flow of the Danube River and the left bank of alluvial forests. The territory is represented by the main course of the Danube and its left bank with inundated forests. The sufficient amount of natural water habitats (rivers, swamps) as well as artificial water reservoirs provides good preconditions for nesting of Little Egret (Egretta garzetta), Little Bittern (Ixobrychus minutus), Common Tern (Sterna hirundo), Garganey (Anas querquedula), Common Redshank (Tringa totanus). The presence of forest habitats, especially long-stemmed stands with the occurrence of nesting places of White-tailed Eagle (Haliaeetus albicilla), Black Stork (Ciconia nigra) and Black Kite (Milvus migrans) increases the value of the protected avian territory even more.

The activities that may negatively influence the goals of protection in the CHVU Dunajské luhy

(after reflecting the type of the intention assessed hereby), include (http://www.sopsr.sk):

- *Highways*
- *Driving on water scooters and motor boats*
- *Locating facilities on water flows and/or other water surfaces other than for navigation or administration of water flow or water dam*
- *Building and marking of tourist trails, educational trails, running trails, skiing tracks and bike tracks*
- *Spreading of all non-original species of animals*
- *Maintenance of vesture on banks (authorization for flow administrator) above 1000 metres in length*
- *Cutting of bushes above 500 m2*
- *Spreading invasive species of plants specified in Annex no. 2 to the Regulation*
- *Non-covered parking lots and stopping areas*
- *Purpose-built communications*
- *Spreading of non-original species of plants (with the exception of species specified in Annex no. 2 and 3 to the Regulation)*
- *Cutting of trees above 80 m2*
- *Removal of vesture on banks by complete removal (authorization for flow administrator) above 100 metres in length*

Table 5: In the CHVÚ, object of protection are the following species of birds:

Slovak name	Latin name	Supposed count of nesting pairs[6]			Count of individuals wintering in the SR[7]
		in the CHVÚ	in the SR	in the EU (thou.)	
Black Stork	*Ciconia nigra*	4 - 6	400 - 600	7,8 - 12	0 - 2
Sand Martin	*Riparia riparia*	180 - 420	10 - 20 thousand	5400 - 9500	0
Little Bittern	*Ixobrychus minutus*	12 - 34	200 - 400	60 - 120	0
Mediterranean Gull	*Larus melanocephalus*	30 - 70	50 - 125	120 - 320	0
Black Kite	*Milvus migrans*	5 - 6	15 - 20	64 - 100	0
Common Goldeneye	*Bucephala clangula*	0	0	490 - 590	9000
Red-crested Pochard	*Netta rufina*	7 - 18	10 - 40	27 - 59	0 - 10
Common Pochard	*Aythya ferina*	0	500 - 1000	210 - 440	6300 - 6900
Tufted Duck	*Aythya fuligula*	0	250 - 500	730 - 880	25000 - 27000
Garganey	*Anas querquedula*	1 - 7	100 - 200	390 - 590	0 - 30
Gadwall	*Anas strepera*	12 - 21	50 - 80	60 - 96	0 - 240
Common Redshank	*Tringa totanus*	3 - 8	35 - 70	280 - 610	0
Marsh Harriers	*Circus aeruginosus*	7 - 16	1000 - 1500	93 - 140	0
Tawny Pipit	*Anthus campestris*	4 - 6	200 - 250	1000 - 1900	0
White-tailed Eagle	*Haliaeetus albicilla*	1 - 4	10 - 14	5 - 6,6	40 - 80
Smew	*Mergellus albellus*	0	0	8,1 - 17	100 - 700
Common Tern	*Sterna hirundo*	110 - 240	810 - 815	270 - 570	0
Common Kingfisher	*Alcedo atthis*	20 - 45	700 - 1300	79 - 160	700 - 1400
Little Egret	*Egretta garzetta*	2 - 5	0 - 30	68 - 94	0

The protected avian territory is declared also for the purpose of the assurance of a favourable condition of the habitats and the assurance of conditions for survival and reproduction of migrating water birds, the birds creating groups during migration or wintering. The following species are concerned: Common Sandpiper, Eaton's Pintail, Northern Shoveler, Garganey, Eurasian Wigeon, Mallard, Gadwall, Greater White-fronted Goose, Greylag Goose, Taiga Bean Goose, Grey Heron, Common Pochard, Tufted Duck, Greater Scaup, Ferruginous Pochard, Common Goldeneye, Whooper Swan, Mute Swan, Eastern Great Egret, Common Coot Common Snipe, Tasmanian Native-hen, Arctic Loon, Red-throated Loon, Armenian Gull, Mew Gull, Black-headed Gull, Great Snipe, Velvet Scoter, Common Scoter, Smew, Common Merganser, Red-breasted Merganser, Red-crested Pochard, Great Cormorant, Great Crested Grebe, Red-necked Grebe, Black-necked Grebe, Water Rail, Tricolored Grebe and Green Sandpiper.

Characteristics of the affected parts of CHVÚ Dunajské luhy

[6] Reporting art. 12 in 1.1, Database, retrieved on 4 Feb 2014. Available from: https://www.sopsr.sk/reporting/2012/, European Agency for Nature Protection, retrieved on 4 Feb 2014. Available from: http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=SKCHVU007

[7] Reporting art. 12 in 1.1, Database, retrieved on 4 Feb 2014. Available from: https://www.sopsr.sk/reporting/2012

Variant 1 - red

The intention crosses CHVÚ by a system of several adjacent bridges with 4 m bilateral walls against birds. The minimum clear height of these bridges is 5.5 metres in the area of left-bank alluvial forests (maximum 15 m). In the section bridging the Danube, the maximum passable height is around 17 m. The length of the system of bridges is approximately 3 km.

This variant passes through the CHVÚ in its North part, in particular the upper part of Hrušovská zdrž Dam, where the entire inundation part is not permanently flooded. Permanently increased level in this part is just in the main bed of the Danube and its branches. There are the softwood and hardwood inundated forest stands or lowland mown meadows in the flooded part. The size and composition of forests make them a suitable habitat for timid species of precious birds (black stork, black kite, white-tailed eagle). The problem is in the relatively frequent disturbance by visitors moving alongside the flooding embankments or along larger river arms. The reason is in the vicinity of the agglomeration of Bratislava; the number of visitors in the currently calmer left-bank side with floodplain forests serving as a peaceful territory for timid bird species will probably increase dramatically once the intention is put in operation.

The part of the intention is also the connection of cycling routes lead at the right-side and left-side embankment of the waterworks Gabčíkovo through the flyover bridge above the Danube River. This is solved by a cycling route/service router with the width of 6 meters that will link the cycling routes on both banks of the Danube with the territory under the bridges where it will lead throughout the entire territory of floodplain forests up to km 5.500. Here, the bridges end and the service road connects to the local traffic network. It should be asphalt-covered and provide for movement of cyclists and in-line skaters. This communication will increase the movements of persons and the related disturbance of timid species directly in the core of the CHVÚ.

The area taken within the CHVÚ is 11.13 ha, or 0.067 % of the total area of the CHVÚ.

Variant 2 - Green

This variant crosses the CHVÚ some 650 m to the south from the red variant.

The intention crosses the entire territory of the CHVÚ on a system of bridges (with an exception of some 150 m), with passable height at least 5.5 m. The length of the system of bridges is approximately 2.7 km. The anti-noise and anti-glare walls on the place of the passage through Natura 2000 system (ca km 3.000 - 5.700) are designed alongside the entire length of the passage through the locations of Natura 2000 system (to the right km 2.900 - 7.500; to the left km 2.900 - 5.800) . However, their height is just 2 m.

The area taken within the CHVÚ is 12.77 ha, or 0.08% of the total area of the CHVÚ.

Affected objects of protection

The identification of the affected objects of protection is based both on the performed natural science research within the Natura assessment (March - September 2013, HBH Projekt, spol. s r.o.), avifauna surveys performed in previous project preparation steps (especially Kúdela, Melišková, Littera, 2011), and on the habitat requirements of individual species. Also, information from the on-line database of the Slovak Society for Ornitology/BirdLife Slovensko (http://aves.vtaky.sk) was used (hereinafter referred to as the database).

The objectives of protection shall be or may be affected by the intention through the following impacts: taking of suitable habitats, noise and light disturbance, disturbance by increased movement of persons specially on the left-bank cycling route and in forests, collisions with vehicles, pollution of environment.

Black Stork *(Ciconia nigra)*

It inhabits forests, both alluvial and broad-leaf, mixed, and coniferous, from lowlands up to an elevation of approx. 1000 m. It feeds on the sides of water dams or small brooks, covered by vegetation if possible. It catches fish up to 25 cm size, in addition to them also water insects, frogs and newts. In the areas with wet meadows, it feeds mainly on grasshoppers, in addition to it also on frogs, rodents and baby birds. It gets food from places up to the distance of 10 km from its nest.

According to the sightings of the African Oddysey project, it can fly for food up to 20 kilometres from the nest. It searches for peaceful and hidden places, it avoids human settlements. Fluffs, so called pellets, are formed from the indigestible parts of the food of storks, the vomit them similarly as owls and birds of prey. It nests individually on trees.
Population trend in Slovakia is a slight growth, the population trend in the EU is stable (BirdLife Slovakia). The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
V *In recent past, 1 pair nested in the part of the CHVÚ affected by the construction of D4 highway until 1995. Nowadays, the nesting population in the entire CHVÚ is at historical minimum, the nesting of just one pair was observed in 2009. Despite that, Black Stork occurs in the CHVÚ every years, including the area affected by the proposed activity.*

Sand martin *(Riparia riparia)*

Lives in locations with high clay, dust, or sand banks of waters. Rarely, it appears in locations distance far from water surfaces, e.g. at sand mines and brick plants. It nests in colonies alongside the lower parts of rivers in the southern Slovakia, more rarely also in northern Slovakia. Strictly migratory. Arrives in the second half of April, departs at the end of August or in the first half of September.
The European nesting population counts more than 5.4 million pairs. The numbers fluctuate strongly depending on changing conditions in nesting locations; however, the main influence are extraordinary dry periods in wintering locations.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
In 2011, several pairs tried to nest on the bank of the Danube in the left-bank part of the territory close to the intention; due to a slide of a wall, they were not successful.

Little Bittern *(Ixobrychus minutus)*

In terms of area size, little bittern is the most spread of egret-like species. It resides in vast swamps and fishing ponds as well as small, often relative disturbed locations. A condition is the presence of suitable verdure (reed, bulrush, bushy willows) growing directly into water and changing for a free water surface. It prefers older reed growing directly in deeper water. In Slovakia, it nests in lowlands and basins of the entire Southern part of Slovakia, its nesting distribution is not sufficiently researched.
These birds collect their feed in grown flat banks of rivers and fishing ponds, in reeds and hidden locations in the middle of swamps, sometimes waiting for the food on banks, on reed stalks above water, in branches of trees, especially in locations where water vortexes bring insects, frogs, and other water animals. Migratory bird in the entire Europe.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
In the part influenced by the proposed activity, potential nesting locations of the species are found in reed segments in arms and gravel mines in the inundated area of the Danube on both banks. In 2011, it was not found in the affected area; the most suitable habitats of the species within the affected territory were destroyed in the previous years during the construction of houseboats and during modifications of banks. Despite that, it is not possible to exclude that Little Bittern may nest in the affected area of the CHVÚ again in the future as a number of the nesting locations are irregular and are also created depending on the current status of vegetation.

Mediterranean Gull *(Larus melanocephalus).*

The Mediterranean Gull nests in colonies, in our conditions mostly on islands of fishing ponds and larger water dams, solely in the colonies of the black-headed gull (Larus ridibundus). In nesting locations, Mediterranean gulls appear from the end of March until the end of July. Some pairs start nesting in the 2nd decade of April, most in 3rd decade of April and 1st decade of May. Nesting of mixed pairs of the Mediterranean gull and the black-headed gull.

V During the nesting period, they feed mostly on ground and water insects, univalves, small quantities of fish, rodents, and worms. In winter and during migration, it feeds on fish, molluscs, and waste, sometimes also on landfills.
The Mediterranean gull nests only in the territory of Europe and Turkey. 7600 - 8900 pairs, or 2.8 - 6.3% of the European population of black-headed gull nest in the territory of the EU.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Nests in colonies on islands with low vegetation; at present, nests in the CHVÚ only on one of the islands on the Hrušov dam, outside the territory taken by the structure.

Black Kite *(Milvus migrans)*

The species inhabits mostly forests in the vicinity of water flows, dams, channels and other water surfaces in lowlands, less in uplands. Rarely, it nests in agrocenoses in windbreaks and forests; the nesting locations in the mountains of Eastern Slovakia no longer exist. The feeding territory may be rather large, according to the local conditions, even 5 or more kilometres away from their nest. In Slovakia, the nesting population is concentrated mostly in floodplain forests of the Morava, Danube, and Latorica Rivers, belonging to the orographic units Dolnomoravský úval, Borská nížina, Podunajská and Východoslovenská rovina. The numbers of nesting population was assessed in 1999 to 40 to 60 pairs, the log-term population trend shows its significant decrease. Individuals from the European population are strictly migrating and spend winter in the sub Saharan area.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
V *In past (1970 - 1980), several pairs nested the part of the Protected Avian Territory affected by the construction of highway D4 annually, their number decreased in the 1990s, yet nesting was still regular (1 - 3 pairs). Nowadays, it nests only irregularly, however it occurs every year. The decrease in the number of nesting pairs was very significant in our entire section of the Danube river (e.g. just 2 pairs in the entire CHVÚ in 2009 and no pair in the entire CHVÚ in 2011),*
and in the entire territory of Slovakia, and black kite is one of our most endangered species of birds. From this point of view, the considered territory still remains the significant location of the species and we may suppose that when the Danube population starts growing again, it would occupy the former territories in the concerned area.

Red-crested Pochard *(Netta rufina)*

In the summer, Red-crested Pochard prefers large and deep lakes; in winter, it flies to lagunas in large flocks. It feeds mostly on seeds, water plants, water grass and, to a lower extent, by invertebrates and small fish. It often submerges when looking for food and can stay under water for more than half a minute. It lives mostly on water surfaces partially covered by reed and rich vegetation. It requires larger areas of free water surface. The nesting period is in May and June. Nests are usually located on islands and/or banks or in reeds, usually well hidden in vegetation.
The population trend in Slovakia is a slight growth, the population trend in the EU - slight growth.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
In the CHVÚ, it nests primarily on larger dead arms, secondarily, on the Hrušov dam and around it. At present, nesting on dead arms is rare and irregular; on the contrary, on the Hrušov dam it has nested regularly since 1995 and the number quickly grew to above 10 pairs. The proposed activity crosses the border of the area where the species regularly appears and nests.

Garganey *(Anas querquedula)*

The garganey prefers large and small water surfaces that do not have to be deep. An important part of these habitats is plant vegetation, both at the banks and freely floating. It nests usually in lowlands and uplands. The nests are in dry locations, for example in reed or in sedges. Food is composed by plant and animal components. The plants include seeds and vegetative parts of water

plants. From animals, they feed on fish roe, tadpole, crustaceans, molluscs, grannoms and beetles.
The population trend in Slovakia is a slight decrease, the population trend in the EU - slight decrease. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
V *In the CHVÚ, it nests primarily on larger dead arms, secondarily, on the Hrušov dam and around it. At present, nesting at dead arms is extraordinarily rate and irregular; nesting records on the Hrušov dam are also rare. The proposed activity crosses the border of the area where the species regularly appears and where nesting has been proven.*

Gadwall *(Anas strepera),*

They prefer larger water surfaces, wet pastures, or swamps with dense vegetation as habitats. They appear usually alone or in pairs; for migration or nesting, they often form small groups. They feed mostly on water plants; in the summer, they also eat small water insects that is first also eaten by its nestlings.
They build their nests on the ground, usually well hidden in reed or other water plants.
The population trend in Slovakia - stable, the population trend in the EU - unknown. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
V *In the CHVÚ, it nests primarily on larger dead arms, secondarily, on the Hrušov dam and around it. At present, nesting on dead arms is rare and irregular,however, on the Hrušov dam, it nests regularly in relatively high numbers (dozens of pairs, e.g. 19 pairs found in 1998 (Svetlík in Rác 2006). The proposed activity crosses the border of the area where the species regularly appears and nests.*

Common Redshank *(Tringa totanus)*

The nesting territories of the common redshank are wet locations or the surroundings of flat waters with low non-wooden vegetation, especially wetlands, similar borders of ponds, their grown bottoms during the summer, swamps, and even fields in the vicinity of waters. They collect their food from the ground, especially on wet soil, on plants, and in shallow water.
It is a migrating bird, wintering in the Western Europe and in the Mediterranean. It returns to nesting locations in March and early April and leaves sometimes already at the end of June, i.e. very early after nesting; departures are prolonged until August. It nests in pairs, however, in suitable locations, several pairs nest close to each other.
The common redshank is a diminishing species throughout Europe; in years 1970-1990 alone, some 40% of the nesting population diminished. The main reasons of diminishing are in degrading and loss of nesting locations by draining and intense agriculture.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
Type of wet meadows and uncovered shallow banks, at present, it nests in the CHVÚ only rarely on secondary habitats on the Hrušov dam. It does not nest in the territory close to the structure at present.

Western March Harrier *(Circus aeruginosus)*

V During nesting, it seeks for reed, bulrush, and other bank vegetation on ponds, lakes, blind arms of rivers, or marshes where it builds its nests. Sometimes it even nests in willow bushes or even in grain fields. It hunts in open land of fields and meadows adjacent to the location. It is migratory, rarely stays for winter.
The feeding circuit does not have a strict border; in Central Europe, the average size of circuit per pair is around 15 km2. It hunts in fields and meadows connected to wetlands. Birds may often hunt up to 5 - 6 km from the nest, in exceptional cases up to 8 km from the nest (Horák and Hora, 2006).
After a strong reduction of numbers in the 19th and beginning of the 20th century due to pursuing and draining of wetlands, after 1940 it has re-spread and numbers grew. This trend survived until today. The population is seen as secure and slightly growing (BirdLife International 2004).

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
It does not nest in the part of CHVÚ affected by the construction of the D4 highway. Hunting locations for the species are partially located in the territory, both in the water areas in the Danube floodplains and in open areas (fields, meadows) even outside the CHVÚ itself. The pairs nesting on the Hrušov dam, without limitation, regularly fly to the affected area when hunting for food.

Tawny Pipit *(Anthus campestris)*

The nesting territories are locations of a steppe nature, the so-called sandy or stony areas without consistent coverage by vegetation. In Slovakia, these can be heaths, fields, as well as spoil heaps from brown coal mines.
This species with palearctic spread around Europe lives mostly in its southern and eastern parts. Most countries of the Western and Central Europe have seen, since the middle of the 20th century, a drop of their numbers. The most frequently stated reasons include the loss of suitable environment due to intensified agriculture and total eutrophizing of the environment; climate changes have been mentioned as well. Migratory species. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
V *In the CHVÚ, it nests on poorly covered gravel benches; no nesting is known in the area of the proposed activities in the territory of the CHVÚ. Its presence has been documented in the mostly agricultural land in the section from Biskupické luhy to the D1 crossing.*

White-tailed Eagle *(Haliaeethus albicilla)*

Lives mainly on sea coasts. In Slovakia, it lives in the proximity of large rivers and water reservoirs, with a sufficient amount of fish and water fowl. Old forests with large trees must be present nearby; the same applies to rocks cliffs on sea shores. In Slovakia, white-tailed eagle lives mostly in forest habitats close to larger rivers, dams, or systems of water surfaces. In nests at the Danube and nearby Zemplínska Šírava and Latorica, in all cases on trees.
The stable wintering place of White-tailed Eagle is the territory in the section of the Danube river and the Morava river in the areas bordering with Hungary, Austria and the Czech Republic. It winters on the Váh River, the Hron River and other water courses that do not freeze in winter. A larger number of wintering individuals concentrate in locations where they regularly spend nights. The abundance of wintering population is substantially higher than the nesting population, they assess ca 60 - 80 individuals winter in Slovakia.
Adult birds from the Central European area are mostly regular and they spend winter in the proximity of the nesting place. Young birds are unsettled to migrating and they winter in Western or Southern Europe. Nordic birds are migrating and they may winter in our place.
The population trend in Slovakia is a slight growth, the population trend in the EU - large growth.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
The current population of the White-tailed Eagle in the CHVÚ Dunajské luhy is 4 pairs (2006-2011). This is the biggest nesting place of the species in Slovakia and the majority of the Slovak population of White-tailed Eagle nests here. 2009). At present (2009-2011), one pair nests in the territory directly affected by the construction of the highway D4.

Common Tern *(Sterna hirundo)*

It nests in colonies that it established in Slovakia mostly on small islands in ponds or other water dams, often together with the black-headed gull. Individual pairs irregularly nest on floating islands, piles of dung, etc. The numbers of the colony vary strongly on the water surface level, status of plants on the islands, and other factors. The main danger for the nesting locations of the common tern is excessive variation of water level, leading either to flooding of nesting locations or making it accessible to ground predators, especially fox and boars. If a colony is disturbed in a

cold and rainy weather, a large number of small birds may die. Gradual deterioration of the nesting island or excessive growth of tall vegetation contribute to decay and/or abandoning of nesting locations; islands with sharp stones are unsuitable.
They feed mostly on small fish, occasionally on crustaceans, insects, and fish waste. They are strongly bound to water environment. The common tern is strictly migrating. Immediately after leaving the nests, they spread in all directions up to 160 km away.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
They nest in colonies on islands and small islands without vegetation or with just low vegetation, originally mostly on gravel benches. At present, it only nests in the CHVÚ on secondary habitats on the Hrušov dam. The nesting habitat will not be influenced by the impact, the food habitat will.

Common Kingfisher *(Alcedo atthis)*

For most of the year, the common kingfisher lives alone and is strictly territorial. It lives in the vicinity of slowly-flowing clear waters rich in fish. This is why common kingfishers can serve as bioindicators of clear water. Most frequently, they inhabit rivers, brooks, ponds, lakes, dams, and wetlands. The feed mostly on smaller fish that they hunt by head-down attack under water; to a small extent, they also eat water insects and amphibians.
In Slovakia, partially regular and partially moving birds, mostly migratory. Most migratory birds are young birds.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
In CHVÚ Dunajské luhy, they nest diffusely but substantially throughout the territory.

Little Egret *(Egretta garzetta)*

During nesting, it inhabits mostly reed with bushes and trees, alluvial forests, swamps and ponds; recently, it is becoming increasingly frequent in substitute habitats such as rice fields. It uses fields and meadows to collect feed. It moves around rivers and in areas with many ponds and wetlands.
When feeding, it usually slowly walks in shallow water and grabs the feed by speedy use of its long neck. It can collect feed from up to 40 cm in depth; this environment is not accessible to other egrets. Mostly migratory bird but partially only moving.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unknown (xx).
In the part of the CHVÚ affected by the construction of the D4 highway, the little egret has nested in the past (in the first half of the 20th century in the cadastral area of Podunajské Biskupice). During the 20th century, the number of nesting colonies of the little egret decreased on the Slovak-Hungarian segment of the Danube; at present, a single nesting locations close to the municipality of Moča exists. At present (2000 - 2009), the decreasing population trend has stopped, and since 2010 significant population growth has been recorded. Little egret occurs in several parts of the CHVÚ each year, especially in the summer months.

Common Goldeneye *(Bucephala clangula)*

Common Pochard *(Aythya ferina)*

Tufted Duck *(Aythya fuligula)*

Smew *(Mergus albellus)*

These species either winter in the territory of the CHVÚ in larger numbers or they stop by during migration In any case, they are bound to the water environment where they seek for feed directly in water or in its immediate surroundings.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC: Common Goldeneye - favorable (FV), Common Pochard - less favorable (U1), Tufted Duck - favorable (FV), Smew - unknown (xx)

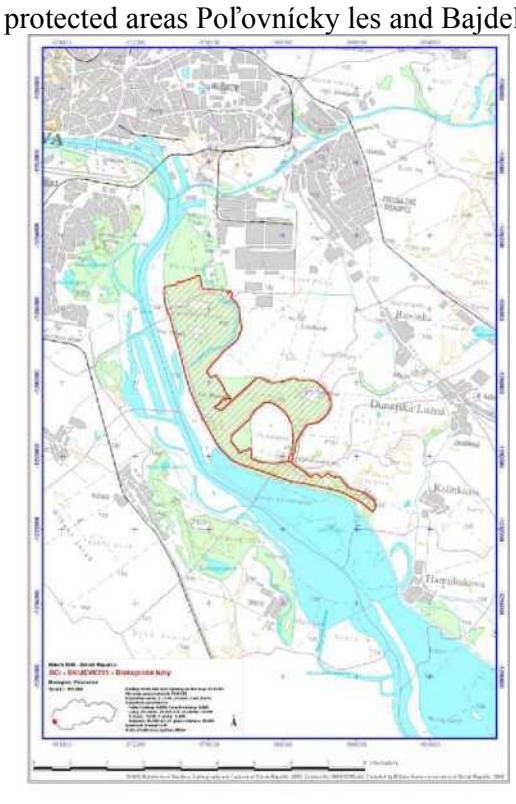
The migration of water species of birds forming groups during the migration or wintering V In a wider territory of the proposed activities, all 41 species listed in Annex 1 to the Regulation no. 440/2008 Coll. were recorded. Presence of 32 of these species was observed directly on water surfaces crossed by the route of the proposed activity.

The numbers of the groups of migratory water birds strongly varies depending on period of the year, weather, hydrological situation, and disturbance. In the monitored area, 36 water-bound birds have been identified in the winter period (October - March); the current number of species varies between 12 and 22 in individual months; the total number ranged from 449 to 2978 individuals.

All of the above bird species will be included in further - detailed - impact assessment (Chapter IV.2).

III.2.2. ÚEV Biskupické luhy

The territory established by the Decree of the Ministry of Environment of the Slovak Republic No. 3/2004-5.1 of 14 July 2004 setting the national list of the territories of the European importance.
The area of the territory is 916.345 hectares. It is located in the territory of the Bratislava II district in cadastral areas of Ružinov and Podunajské Biskupice and in the Senec district, cadastral areas of Kalinkovo and Nové Košariská.
It is thus located on the left bank of the Danube, southwards from the Slovnaft Bratislava area, to the west from the municipalities of Rovinka and Dunajská Lužná. It includes the territories of natural reserves Gajc, Kopáčsky ostrov, Topoľové hony, natural monument Panský diel, and protected areas Poľovnícky les and Bajdeľ.



The Characteristics of the ÚEV

In addition to the typical inundated forests, the subject of protection are also the Carpathian and Pannonian oak and hornbeam forests, thermophilic Pannonian oak forests, natural eutrophic and mesotrophic dead waters, xerothermic grass and herbaceous as well as shrubby stands on calcareous subsoil. The contrast of very wet and very dry habitats on rather small area is the precondition for a huge variety of species of plants and animals with the occurrence of many rare and endangered species.
The Protected Territory of the European Importance (ÚEV) Biskupické luhy was declared for the purpose of the protection of the following subjects of protection:

Biotop (* označuje prioritný biotop)

Habitat (* identifying priority habitats)
3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition species
6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)
91F0 Inundated oak-elm-ash forests alongside lowland rivers
91G0* Carpathians and Pannonian oak-hornbeam forests
91H0* Thermophilic Pannonian oak forests

Species (* designates priority species)
Great Capricorn Beetle (Cerambyx cerdo), Stag Beetle (Lucanus cervus), White-finned Gudgeon (Cottus gobio), Danube Ruffe (Gymnocephalus baloni), Kessler's Gudgeon (Gobio kessleri), European Fire-bellied Toad (Bombina bombina) and Eurasian Beaver (Castor fiber).
Mehelyi's Root Vole* *(Microtus oeconomus mehelyi)*

Characteristics of the Affected Parts of the ÚEV Bratislavské luhy

The intention passes through the ÚEV to the South of Kopáčsky ostrov natural reserve in both variants. The route crosses the entire territory of ÚEV via floodplain forests in both variants. In variant 1, in the entire part of the crossing on a system of bridges with 4 m high bilateral noise walls.

The variant 2 crosses the territory some 650 m south from variant 1 and the bridge ends approximately 200 m before the border of the Biskupické luhy ÚEV. The last 200 m is then on a filling. Noise and glare reduction walls for variant 2 are designed for the entire length of the crossing of the ÚEV (in km 2.900 - 7.500 on the right and in km 2.900 - 5.800 on the left). However, their height is just 2 m.

Variant 1

The area taken within the ÚEV is 3.16 ha, or 0.34 % of the total area of the ÚEV. Variant 2
The area taken within the ÚEV is 3.96 ha, or 0.46% of the total area of the ÚEV.

The objectives of protection shall be or may be affected by the intention through the following impacts: taking of habitats, noise and light disturbance, disturbance by increased movement of persons specially on the left-bank cycling route and in forests, collisions with vehicles, pollution of environment.

The Concerned Subjects of Protection

V The following habitats with European significance that are protected within the ÚEV Biskupické Luhy (WellConsulting, 2013) are located in the vicinity of the intention:

Habitat 91F0 Inundated oak-elm-ash forests alongside lowland rivers
Inundated forests formed by oak, ash, and alder (hardwood inundated forests) in higher and relatively drier positions of lowland flats with less frequent and shorter surface flooding. Soils vary from typologically undeveloped flatland and gleysated to brown, rich in nutrition. The bush layer is well developed and rich in species. The herbs include nitrophilous, mesophilic and hygrophilous species with a strong spring aspect.
Habitat 91F0 is protected in a total of 55 ÚEV in Slovakia. Evaluation of the condition of the habitat from the protection aspect in the Pannonian region - unfavourable (U2).
According to SOPSK data, this habitat forms 504 hectares of the ÚEV Biskupické luhy, or approximately 55% of the area of the ÚEV. Habitat 91F0 is in the taking zone of both variants of the intention. It will be directly affected.
Habitat 6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)
The vegetation is formed by grass and herb communities with prevailing thermophilic types of grasses, sedges, annual, biennial, and multiannual herbs, with spring participation of flowering ephemeral species. The space between scraggles is filled by vine bushes and semi-bushes. The representation of orchideaceae is also significant. These communities are usually located in sun inclinations, usually on soils with medium to big depth, on basic, and less frequently also on minerally poor floors, especially on Cretaceous sediments but also on Paleogene and Neogene

sediments and loess.
Habitat 6210 is protected in a total of 128 ÚEV in Slovakia. Evaluation of the condition of the habitat from the protection aspect in the Pannonian region - unknown (xx).
According to SOPSK data, this habitat forms 91.63 hectares of the ÚEV Biskupické luhy, or less than 10% of the area of the ÚEV. This habitat is located in a relatively large distance from both variants of the intention. However, due to the sensitivity of the sites to emissions (especially NOx), it is necessary to assess the impact of the intention. The closest locations are approx. 600 m from variant 1 and 1 km from variant 2.

Habitat 3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type
The habitat is formed by water plants. These may consist of a single level of submerged plants that are connected to the bottom or freely float in water. Also, they can be formed by species rooted in the bottom with leaves on the surface of water, such as water lilies and pond lilies, and small seed plants with reduced root systems that float on the surface of water, such as duckweed and pteridophytes such as floating watermoss. A number of submerged species may temporarily rise leaves and reproductive organs above the level, such as Utricularia australis (bladderwort). The plants populate waters that are rich or medium rich in nutrition. These are natural or semi-natural dead, periodically flowing, or slowly flowing waters, such as dead arms of rivers, alluvial wetlands, as well as artificial dams (ponds, water dams, material ditches, old mines) and channels in the lowland and upland levels. Vegetation types correspond to local ecological conditions, especially to water transparency and depth, usually up to 2.5 metres in our conditions.
Habitat 3150 is protected in a total of 68 ÚEV in Slovakia. Evaluation of the condition of the habitat from the protection aspect in the Pannonian region - less favourable (U1).
According to SOPSK data, this habitat forms 9.16 hectares of the ÚEV Biskupické luhy, or less than 1% of the area of the ÚEV. Habitat 3150 is in the taking zone of variant 1 of the intention. In case of variant 2, it will not be affected.

Habitat 91G0* Carpathians and Pannonian oak-hornbeam forests
These are forests influenced by the Pannonian area in lowlands and uplands, on fluvial deposits covered by loess loam and in wider bottoms of folds. The verdures are formed mostly by oak, in uplands also by the mountain oak and common hornbeam. Soils are deeper, with good supply of nutritients brought by water from higher positions. The structure of these forests is often damaged due to the sprout system. In undamaged forests, a well-developed bush layer is typical. The lower layer is usually rich in species, formed mostly by thermophilic oak-preferring species and species with medium nutrition demands, with prevailing grass. They differ from the oak-hornbeam Carpathian forests mostly by the absence of the red beech and sedge, as well as by higher representation of certain thermophilic Pannonian species.
Habitat 91G0 is protected in a total of 65 ÚEV in Slovakia. Evaluation of the condition of the habitat from the protection aspect in the Pannonian region - less favourable (U1).
According to SOPSK data, this habitat forms 27.5 hectares of the ÚEV Biskupické luhy, or approx. 3% of the area of the ÚEV. Habitat 91G0 is in the taking zone of variant 2 of the intention. In case of variant 1, it will not be affected.*

Habitat 91H0* Thermophilic Pannonian oak forests
The habitat is formed by the driest oak forests located on sunny sites in warm and dry areas, mostly on limestone and volcanic floors. They cover more extreme reliefs with a high share of stony material and flat soils. Typically, they are loose structures of the downy oak and thermophilic bushes. In higher and colder positions, mountain oak is more significant. The habitat often forms a complex with dry bush (40A0*) and dry grass-and-herb (6190, 6210, 6240*, 6250*) communities, sometimes transferring to pioneering and rock communities (6110*, 8160*).
Habitat 91H0 is protected in a total of 69 ÚEV in Slovakia. Evaluation of the condition of the habitat from the protection aspect in the Pannonian region - favourable (FV).

According to SOPSK data, this habitat forms 0.92 hectares of the ÚEV Biskupické luhy, or approx. 0.1% of the area of the ÚEV. The habitat is not located in the vicinity of any of the variants of the intention. It will not be affected by the intention.

Stag beetle *(Lucanus cervus)*
Stag beetle, the largest European beetle, resides in oak forests and mixed forests and enters even suitable city parks. It prefers warm lowland forests but sometimes also enters higher positions.
Females lay eggs in rotting trunks, beams, and stumps, development takes several years in the Slovak conditions (3 - 5 years), larvae feed on rotting wood. Adult beetles usually incubate already in autumn and spend the winter in chrysalis chambers; they appear in nature from May (exceptionally, in warm years, from the end of April) until August, with maximum in June and July. During the day, beetles can be found on trunks and in treetops, in late afternoons and in evenings (if it is warm), they fly around in treetops. Adults feed by the leaves of oaks, males are attracted by the flowing sap.
This species benefits from selection forests with groups of old broad leaf trees left by. The minimum care conditions then are: leaving of stumps, reduction of glade areas, no ploughing of glade areas, and preference of natural renewal.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - favourable (FV).
This species (larvae and adults) may appear in the entire trajectory of the crossing of ÚEV Biskupické luhy, in both variants. Forests with suitable composition of species are present there.

Great capricorn beetle *(Cerambyx cerdo)*
The great capricorn beetle develops especially in oak, and rarely in elm and walnut; ash and willow are also mentioned and horse chestnut in Southern Europe. It prefers sun-covered trees on sides of forests, in alleys, sunny forests on inclinations and solitaire trees on meadows and pastures (exceptionally in urbanized areas). It attacks usually older live trees; development takes place under the bark and later in the wood of trunks and strong branches in the treetops. The development takes 3-5 years. In nature, adult beetles appear from the end of May until August, with maximum presence from mid-June to end of July. Beetles are active in evenings and an night; they usually spend days hidden or in treetops.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (xx).
This species (larvae and adults) may appear in the entire trajectory of the crossing of ÚEV Biskupické luhy, in both variants. Forests with suitable composition of species are present there.

Bullhead (Cottus gobio)
It lives in faster-flowing flows with clear, oxygen-rich water. Usually, they are mountain brooks and rivers, small spring brooks with a small inclination. It climbs higher than the trout. It requires stony or gravel-and-sand bottom as it likes hiding under stones. The bullhead is very sensitive on flow pollution and sufficience of oxygen in water and is also endangered especially by destroying the inhabited habitats. They can be influenced by predatory pressure, especially by salmonoid fish such as the common trout (Salmo trutta), that are grown in extensive quantities.
The assessment of the condition of the species from the point of view of protection in the Pannonian region pursuant to Article 17 of the directive 92/43/EC - less favourable (U1).
The species is not present in the ÚEV Biskupické luhy in the locations taken by any of the variants.
V *At present it is not present even in the wider surroundings of the intention that can be influenced by the impacts of the intention (Biskupické Danube arm).*

Kessler's gudgeon *(Gobio kessleri)*
The Kessler's gudgeon inhabits shallow flows with a stone-and-gravel substrate. However, it does not fancy very strong flows. It is a short-lived species and its biology is not known yet. It stays close to the bottom in small flocks. It feeds on small water invertebrates and frustules. Due to the permanently reducing numbers and loss of locations in Eastern Europe and in Slovakia where it

used to be abundant, the Kessler's gudgeon is currently a very endangered species, especially due to the very limited area of presence.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (xx).
The species is not present in the ÚEV Biskupické luhy in the locations taken by any of the variants.
V *At present it is not present even in the wider surroundings of the intention that can be influenced by the impacts of the intention (Biskupické Danube arm).*

Danube Ruffe *(Gymnocephalus baloni)*
The Danube ruffe lives in flocks especially in deeper flowing waters of the main basins of rivers, in deep shades under influxes of inflows and in shades under water gates. It prefers sandy or stony firm substrate. The species is a typical bentophage, looking for feed in strongly flowing sections with gravel bottoms. It has a relatively wide feed spectrum with dominant larvae and chrysalis of midges, larvae of sedgeflies, and larger crustaceans. Reproduction takes place in flows on gravel bottoms.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (xx).
The species is not present in the ÚEV Biskupické luhy in the locations taken by any of the variants.
V *At present it is not present even in the wider surroundings of the intention that can be influenced by the impacts of the intention (Biskupické Danube arm).*

European Fire-bellied Toad *(Bombina bombina)*
The typical habitats of this species are shallow dead waters with soft-leave vegetation in well sun-covered locations (Baruš et al., 1992): shore areas of ponds, shades. It also inhabits periodical basins. It spends most of the year in water where in mates and lays eggs, usually in several layers depending on rain (from April until August).
Toads are significantly endangered by country-shaping changes - unification of agricultural land, modification of ponds for agricultural and recreation purposes (i.e. deepening of water and removal of bank vegetation, meliorations of wetlands, change of meadows to fields, de-watering of meadows and forests, regulation of brooks and piping of small water flows, filling of lakes in mines and sand mines by municipal waste, melioration, chemicals in agriculture and similar negative influences.
The assessment of the condition of the species from the point of view of protection in the Pannonian region pursuant to Article 17 of the directive 92/43/EC - less favourable (U1).
Toads may occasionally appear throughout the entire route through ÚEV Biskupické luhy, in both variants.

European Beaver *(Castor fiber)*
Most frequently, it inhabits flows with well-developed bank verdures of willows and poplar. It prefers slowly flowing to dead waters with a sufficient depth and limited surface variation (ponds, larger disconnected river arms, mill raceways with stable water level, dams over gates, lakes from gravel and sand mining).
Beaver is a herbivore, consuming mostly young branches of trees (poplar, willow, ash, alder). Cutting of trees is most intense in autumn and winter months. When cutting, it prefers trees with a diameter up to 20 cm. In the summer, the main component of its feed is herbs.
Beavers live in pairs, usually together with two generations of young animals that defend their territories (on water flows, they range from several hundred metres (800 m) up to around 2 km). On regulated flows, it can be even more. Sunset and night activities prevail.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - favourable (FV).
The presence of the territories of the beaver in the area of the intention was documented by residence signs alongside the Biskupické Danube arm, partially in the space permanently taken by the structure. Occurrence in parts of forest further away from water is not probable. It leaves water surfaces for a distance of no more than several dozen of metres (20 m being the most

frequently stated value).

Mehelyi's Root Vole *(Microtus oeconomus mehelyi)*
In the territory of Slovakia, the species inhabits wetland habitats situated in bank and litoral parts of swamps, cut meanders, lowland rivers, lakes, etc. It prefers sites with a regular water regime (stable subsurface water level, regular flooding) and consistent coverage by water-requiring vegetation, mostly sedge (Carex sp.), creating elevated formations - bults - in the water-logged terrain.
In the territory of Slovakia, Mehelyi's root vole is only spread in the southern part of the Danubian Flatland. Latest research has discovered residual populations also in the most southern part of the Hron uplands. The existence of the prevailing majority of locations depends on the hydrological conditions in the Danube.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unfavourable (U2).
Suitable wetland areas with a high level of subsurface water are located in the ÚEV around the Biskupické Danube arm.

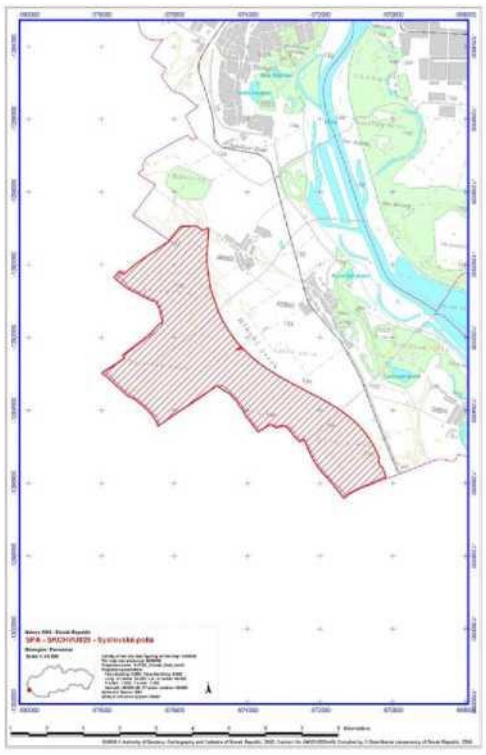
Table 6: Potential influencing of the protected objects of luhy by the intention:

Slovak name	Possible influence by the	Justification
3150 - Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type	Yes	habitat taking
6210 - Xerophilous grass and herb bushy stands on lime subsoil	Yes	habitat taking
91F0 - Inundated oak-elm-ash forests lowland rivers	Yes	habitat taking

91G0* - Carpathians and Pannonian oak-hornbeam forests	Yes	habitat taking
91H0* - Thermophilic Pannonian oak forests	No	sufficient distance from the intention
Bullhead (Cottus gobio)	No	sufficient distance from the intention
European Fire-bellied Toad (Bombina	Yes	influencing of the habitat
Stag beetle (Lucanus cervus)	Yes	influencing of the habitat
Great capricorn beetle (Cerambyx cerdo)	Yes	influencing of the habitat
Kessler's Gudgeon (Gobio kesslerí)	No	sufficient distance from the intention
Danube Ruffe (Gymnocephalus baloni)	No	sufficient distance from the intention
European Beaver (Castor fiber)	Yes	habitat taken, disturbance
Mehelyi's Root Vole* (Microtus oeconomus	Yes	disturbance

III.2.3. CHVÚ Sysľovské polia

Characteristics of protected avian territory



The Sysľovské polia protected avian territory was declared by a Regulation of the Ministry of Environment of the Slovak Republic no. 234/2006 Coll. as amended, with an area of 1772.94 ha. The territory is located in the Bratislava V district.

The territory is a Pannonian lowland type, represented mostly by agrocenoses and thin stripes of windbreaks and bushes, usually secondary xerothermal and/or semi-xerothermal grass and herb communities rich in species on the loess and deposits of the Danube River. The tufty grass species and the closed vegetation cover determine the appearance of the habitat resembling the grass communities on fallow land. The prevailing part of the territory is however agriculturally intensively utilised – the target crops are mainly the cultures of cereals, the growth of Alfalfa, sunflower and rape kale. The windbreak belts and shrubs are formed in particular by Black Locust, Tree of Heaven, Field Maple, Wild Pear tree and Elder.

From the European viewpoint, the Sysľovské polia protected avian territory performs an important role of a wintering location for approximately 10% of the Central European population of great bustard; more than 1% of the Central European populations of geese also regularly spend winters in the territory. The survival of the great bustard in Slovakia is directly linked to creation of protection conditions for this territory that is an important historical reproduction location therefor. The regular winter occurrence of a relatively large number of more than 160 - 200 bustards documents the significance of the territory.

The territory is also the last regular nesting location of bustard and of the red-footed falcon (Falco vespertinus) in Slovakia. The location has seen nesting of other precious steppe species, especially saker falcon (Falco cherrug) and hen harrier (Circus cyaneus).

Table 7: In the Protected Avian Territory (CHVÚ), the following bird species are the subject of protection:

Slovak Name	Latin Name	Supposed nesting		no. of pairs	Count of individuals wintering in the CHVÚ	Count of individuals wintering in the SR
		in the CHVÚ	in the SR	in the EU (thou.)		
Great Bustard	*Otis tarda*	3-5	10	31 - 36	100	150 - 200
Greater White-fronted Goose	*Anser anbifrons*	0	0	62 - 72	1500	3700 - 4600
Taiga Bean Goose	*Anser fabalis*	0	0	140	2500	2500
falcon red-footed	*Falco vespertinus*	5 - 20	5 - 20	26 - 39	0	0

Characteristics of the Affected Parts of CHVÚ Sysľovské polia

None of the variants directly intervene with the CHVÚ. The commencement of the intention is placed to the existing Jarovce intersection, i.e. ca 20 m from the North boundary of the CHVÚ. Variants 1 and 2 are identically routed in these section. From the Jarovce interchange, the E58 road already follows to Austria at present, in immediate vicinity of the northern border of CHVÚ Sysľovské polia.

The protection objects will be affected by the intention during movements outside the CHVÚ (collisions with vehicles) and by other impacts (disturbance by noise, light, pollution by absorbed emissions). Also, the impacts of the already existing traffic structures (D2) must be summarized with the intention and then considered.

Objects Affected protected

Great Bustard (Otis tarda)

Published data show a dramatic drop of the numbers in our territory. In 1890-1900, the estimated number of individuals 2400; in 1956, it was 1165, and in 1973, only 410 to 693 individuals. After 1975, population has been significantly broken down to flocks with small numbers of members and regular summer presence was limited to the territory of the Danubian Flatlands. During migration period, it was seen in Borská lowlands, Danubian Flatlands, Trnava and Hron uplands. Flyovers over the assessed intention are thus possible.

The originally steppe species inhabits cultural steppes in Slovakia in lowlands and uplands with elevations of up to 300 m without consistent forests and significantly rugged terrain. Its current nesting environment includes open areas of agricultural single-plant fields; yet this habitat is only substituting and does not suit the bird in a long term. It nests on the soil, usually in crop plants and clovers.

The lekking period takes usually place in April, extending potentially up to the beginning of June. Inseminated females fly from the lekking location to a distance of several kilometres. Sometimes, they only leave for 50 - 100 metres, yet often they fly much further, sometimes even 5 or 10 km. For winter, they unite to flocks, males separately from females with this year's young animals. If the environment provides sufficient feed, they don't migrate; otherwise, they fly for distances of many kilometres (Škorpíková, 2008).

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).

The Sysľovské polia CHVÚ is the last regular nesting location of the great bustard in Slovakia, with up to 5 nesting females. Nesting takes place more in the part of the CHVÚ that is closer to the border with Austria and Hungary. Most of the nesting population occur in the neighbouring territories in Austria and Hungary (AT1125129 Parndorfer Platte - Heideboden a HUFH10004

Mosoni-sík). The Sysľovské polia CHVÚ is a significant winter location for the species.

Bean Goose *(Anas fabalis)*
It nests in the north of Europe and Asia in the taiga and tundra zone. Its nests are located on the ground, immediately next to water. In nesting locations, it feeds on grass and water plants, during migration and in winter locations with grasses also on clover, winter crops, etc.; it feeds on free open areas.
The locations of stops require larger water areas where geese spend nights, bathe and drink in the afternoon, and pasture must be within reach from morning and afternoon flyings - whether seeds on trees or grass on pastures - and it must be visibly safe. Up to ten thousand of geese then concentrate in such locations. Migratory and winter concentration points are traditionally the same. Geese fly from each other, led by experienced individuals, in phases long up to several dozens of kilometres.
Population trend in the EU - stable. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
Around 2500 individuals regularly spend winters in the Sysľovské polia CHVÚ.

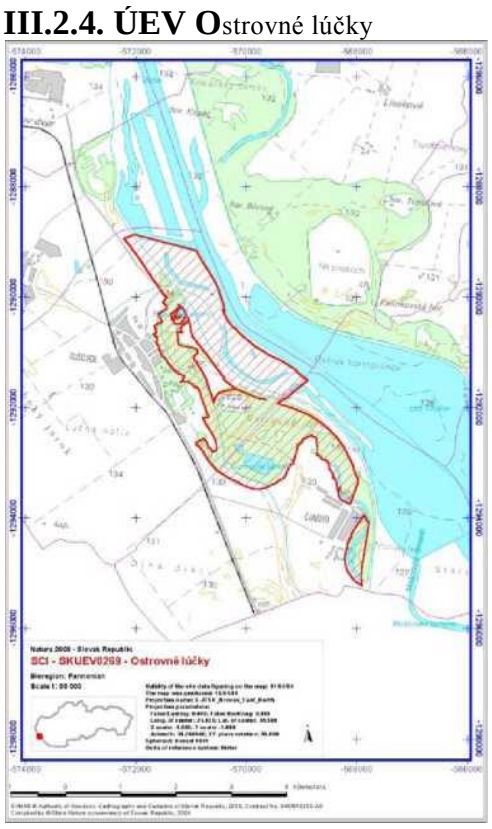
Greater White-fronted Goose *(Anas albifrons)*
It nests in tundra in fast north-east of Asia (ssp. albifrons) and in Greenland (ssp. flavirostris), winters in Western, Central, and South-Eastern Europe. The greater white-fronted goose is a migratory bird, arriving from nesting locations in the beginning of April and departing in October to December. It spends winters in the south
- at the Caspian and Black Sea, in the Danube Flatland, or at the North Sea.
Population trend in the EU - large growth. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Around 2000 individuals regularly spend winters in the Sysľovské polia CHVÚ.

Red-footed falcon *(Falco vespertinus)*
As the red-footed falcon usually nests in colonies, it is more or less bound to the occurrence of nesting colonies of rooks *(Corvus frugilegus)*. However, this characteristic is gradually disappearing and currently, it nests separately, with pairs taking the nests of crows (Corvus corone) or magpies (Pica pica). Nesting colonies formed by dozens of pairs have ceased to existing in Slovakia at the end of the 1970s. The last smaller colony of red-footed falcons has nested in year 1981 nearby Strážne during the monitoring period of 1980 - 1999.
In the entire territory of western Slovakia, a continuously decreasing population trend can be seen. The total nesting population in the period of years 1995 - 2000 in the territory of western Slovakia was estimated to 50 - 70 pairs. During migration (spring arrival and out-of-nest trips), they appear practically in the entire territory of Slovakia, with the exception of continuous forests and elevated positions.
In western Slovakia, it inhabits open agricultural country, the most typical nesting habitat of this species. Nesting environments are most frequently formed by windbreaks, small tree lines, solitary trees and higher bushes with sufficient number of free nests of magpies but also crows. In locations with insufficient number of natural nests, they like populating artificial nests as well.
The population trend in Slovakia - fluctuating/significant decrease, the population trend in the EU - large decrease.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
The Sysľovské polia CHVÚ is the last regular nesting area of the red-footed falcon (Falco vespertinus) in Slovakia, ranging from 0 to 5 pairs.

Table 8: Potential influence of protected objects in CHVÚ Sysľovské polia by the intention (summary)

Slovak name	Possible influence by the	Justification
Great Bustard	Yes	disturbance, collisions with traffic on the intention
Greater White-fronted Goose	Yes	disturbance, collisions with traffic on the intention
Taiga Bean Goose	Yes	disturbance, collisions with traffic on the intention
Red-footed Falcon	Yes	disturbance, collisions with traffic on the intention

III.2.4. ÚEV Ostrovné lúčky



Territory established by Decree of the Ministry of Environment of the Slovak Republic No. 3/2004-5.1 of 14 July 2004 setting the national list of the territories of European importance.

It is located in the territory of the Bratislava district V, in the cadastral areas of Čunovo and Rusovce.

The Characteristics of the ÚEV

The territory of the European importance Ostrovné lúčky includes the preserved fragments of the originally vast inundated forests alongside the Danube River, located at its right bank in the proximity of Rusovce and Čunovo.

The habitats of softwood and hardwood inundated forest, still water and river branches rotate here on a rather small area - in a sharp contrast with very rare xerophilous grassy communities. Such dry places are located on the places with massive gravel alluvia reaching high above the level of ground water.

The Territory of the European Importance (ÚEV) Ostrovné lúčky was declared for the purpose of the protection of the following subjects of protection:

Habitats (* designates priority habitat)

91E0* Inundated willow-poplar and alder forests

3150 - Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type

6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)

91F0 Inundated oak-elm-ash forests alongside lowland rivers Species

Red Flat Bark Beetle (Cucujus cinaberinus) Dragonfly (Leucorrhinia pectoralis)

Stag beetle (Lucanus cervus)

Great capricorn beetle (Cerambyx cerdo)

Kessler's Gudgeon (Gobio kesslerí)

White-finned gudgeon (Gobio albipinnatus)

Bullhead (Cottus gobio)

Danube Ruffe (Gymnocephalus baloni)

Streber (Zingel streber)

Amur Bitterling (Rhodeus sericeus amarus)

European Fire-bellied Toad (Bombina bombina)

Danube crested newt (Triturus dobrogicus)

Greater Mouse-eared Bat(Myotis myotis)

European Beaver (Castor fiber)

Characteristics of the Affected Parts of the ÚEV Ostrovné lúčky

The intention does not directly intervene with the ÚEV, it passes around it from the north. However, the location may be influenced by other impacts - increased absorbed emission and subsequent eutrofying, worsening of water quality, or disturbance or collisions with protected objects on the intention.

Variant 1

The variant 1 passes around ÚEV Ostrovné lúčky with closest distance being some 850 m.

Variant 2

The variant 2 passes around ÚEV Ostrovné lúčky with closest distance being some 140 m.

The Concerned Subjects of Protection

Habitat 91E0* Inundated willow-poplar and alder forests

The habitat includes natural forests existing immediately at flows from lowlands up to mountain springs. The habitat is characteristic for regular flooding by surface water or wetting by subsurface water. In the alluvia of larger lowland rivers, willow and poplar forests (Ls1.1) occur, the so-called softwood inundated forests, with the name derived from the soft wood of poplars and willows as the characteristic trees of this habitat. Species surviving permanent or temporary wetting prevail in the lower layer.

The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unfavourable (U2).

This habitat is located in the part of the ÚEV closest to the intention. The habitat can be influences by the intention.

Habitat 91F0 Inundated oak-elm-ash forests alongside lowland rivers
See Chapter III.2.2 for the characteristics of the site.

This habitat is located in a sufficient distance (more than 500 metres from Variant 2, and 1.35 km from Variant 1). It will not be affected by the intention.

Habitat 6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)
See Chapter III.2.2 for the characteristics of the site.
This habitat is located in a sufficient distance (more than 500 metres from Variant 2, and 1.35 km from Variant 1). It will not be affected by the intention. The considerations were mostly about NOX fallout due to the sensitivity of this habitat to eutrophizing.

Habitat 3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type
See Chapter III.2.2 for the characteristics of the site.

This habitat is located in a sufficient distance (more than 500 metres from Variant 2, and 1.2 km from Variant 1). The consideration related mostly to removal of waste waters from the intention. Load by absorbed emissions of NOx was excluded with regard to the naturally higher saprobity of the habitat. The habitat will not be affected by the intention.

Flat Bark Beetle (Cucujus cinnaberinus)
Larvae develop in rotting wet, black-brown phloem under free bark of fallen or broken broad-leaf trees or in broken strong branches. The main host plants are beech, aspen, and poplar, oak, and other broad-leaf trees.
The survival of the population of flat bark beetle requires the provision of continuous substrate suitable for the development of the species, i.e. to leave the highest possible number of old trees and old wood in natural decay on site. Harvesting is not excluded, but less severe methods of harvest are suitable.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (XX).
The habitat of this kind in the territory of the ÚEV will not be directly affected by the intention, but its quality may be influenced (emissions). The influence on the species must therefore be assessed.

Dragonfly (Leucorrhinia pectoralis)
The typical habitat of the species in Central Europe are smaller, warm dead waters with little nutrients (almost mesotrophic), with high vegetation coverage. The species prefers moorland (peatland) water habitats (sphagnophilic species). Presence is documented also in flooded sand mines, gravel mines, and ponds with an eutrophic nature. The type of vegetation and low pH give the locations a moor nature.
The species spectre and the characteristics of macrophyte vegetation are very rich; however, it does not like vegetations with lots of reed and bulrush. At least a part of the water surface must be clear; sufficient sunshine and stable level of water are also important.
The assessment of the condition of the species from the point of view of protection in the Pannonian region pursuant to Article 17 of the directive 92/43/EC - less favourable (U1).
The main habitat of this species in the territory of the ÚEV will not be affected by the intention directly nor indirectly. A suitable habitat of this species (a blind arm) is located at least 400 m from the intention. It is thus unnecessary to assess the impact on the species any further.

Stag beetle (Lucanus cervus)
See Chapter III.2.2 for the characteristics of the species.

The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - favourable (FV).
The habitat of this kind in the territory of the ÚEV will not be directly affected by the intention, but its quality may be influenced (emissions). While the 91E0 habitat is not directly typical for stag beetles, threes (willows, poplars) for which it is mentioned are present here (Čížek, Bezděk, 2006). The influence on the species must therefore be assessed.*

Great capricorn beetle (Cerambyx cerdo)
See Chapter III.2.2 for the characteristics of the species.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (XX).
The habitat of this kind in the territory of the ÚEV will not be directly affected by the intention, but its quality may be influenced. The influence on the species must therefore be assessed.

Streber (Zingel streber)

A reophilic bentic species, inhabiting stronger flows of rivers in sub-mountain zones and main flows of large lowland rivers. It prefers graven and stone bottoms. Similarly to the common zingel, it lies on the bottom where it digs holes. Similarly to the common zingel, it moves in jumps. This species is a typical bentophage.
The habitat of this species in the territory of the ÚEV will not be affected by the intention directly. Considering the size of the flow and the nature of the project, indirect influence on water quality and habitat quality lower in flow direction that could influence this species (turbidity, pollution of water) can also be excluded.

Amur Bitterling (Rhodeus sericeus amarus)

Amur bitterling inhabits mostly dead or slowly flowing waters, such as certain ponds, semi-flowing and dead arms, coves of rivers and irrigation channels, often in massive numbers (locally). It lives in flocks and feeds on green and fibrous algae, frustules, and vegetation detritus. The presence of ostracophilic amur bitterling is the presence of water conchiferi, as the amur lays eggs into the branchia cavity thereof. It is a short-lived fish living for five years only exceptionally. It can grow to a maximum of 10 centimetres.
The main habitat of this species in the territory of the ÚEV will not be affected by the intention directly nor indirectly. A suitable habitat of this species (a blind arm) is located at least 400 m from the intention. It is thus unnecessary to assess the impact on the species any further.

Bullhead (Cottus gobio)
See Chapter III.2.2 for the characteristics of the species.
The habitat of this species in the territory of the ÚEV will not be affected by the intention directly. Considering the size of the flow and the nature of the project, indirect influence on water quality and habitat quality lower in flow direction that could influence this species (turbidity, pollution of water) can also be excluded.

White-finned gudgeon (Gobio albipinnatus)

Deeper waters of larger flows in lowland areas, their smaller feeders with strong clay or sand bottom, less frequently in inundation waters.
The habitat of this species in the territory of the ÚEV will not be affected by the intention directly. Considering the size of the flow and the nature of the project, indirect influence on water quality and habitat quality lower in flow direction that could influence this species (turbidity, pollution of water) can also be excluded.

Kessler's gudgeon (Gobio kessleri)
See Chapter III.2.2 for the characteristics of the species.

The habitat of this species in the territory of the ÚEV will not be affected by the intention directly. Considering the size of the flow and the nature of the project, indirect influence on water quality and habitat quality lower in flow direction that could influence this species (turbidity, pollution of water) can also be excluded.

Danube Ruffe (Gymnocephalus baloni)
See Chapter III.2.2 for the characteristics of the species.
The habitat of this species in the territory of the ÚEV will not be affected by the intention directly. Considering the size of the flow and the nature of the project, indirect influence on water quality and habitat quality lower in flow direction that could influence this species (turbidity, pollution of water) can also be excluded.

European Fire-bellied Toad *(Bombina bombina)*
See Chapter III.2.2 for the characteristics of the species.

The main habitat of this species in the territory of the ÚEV will not be affected by the intention directly nor indirectly. It is thus unnecessary to assess the impact on the species any further. Protective measures in the territory of the site is necessary (see Chapter V).

Danube crested newt (Triturus dobrogicus)
Reproduction locations are in dead, deeper water basins, lakes, holes, channels, etc. Avoids waters with fish. It lives in forests but also in deforested land if it find sufficient locations to hide for a hidden way of terrestrial life in the surroundings of the reproduction location.
The main habitat of this species in the territory of the ÚEV will not be affected by the intention directly nor indirectly. The closes habitat suitable for the presence of newt in the territory of the ÚEV is located some 380 m from variant 2 (i.e. 1.1 km from variant 1). The location is separated from the intention by the Jarovecké arm. It is thus unnecessary to assess the impact on the species any further.

European Beaver (Castor fiber)
See Chapter III.2.2 for the characteristics of the species.

The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - favourable (FV).
The habitat of this species in the territory of the ÚEV will not be affected by the intention directly nor indirectly. Also, the migration possibilities of the species will not be disturbed with regard to the parameters of the bridges in both variants. However, it shall be necessary to assess the indirect impacts with regards to the proximity of the intention in variant 2 (especially disturbance).

Greater Mouse-eared Bat (Myotis myotis)

Reproduction colonies are bound to attic premises, more rarely to underground premises; they spend winters in underground premises. The hunting regions are in various forests.
The assessment of the condition of the species from the point of view of protection in the Pannonian region pursuant to Article 17 of the directive 92/43/EC - less favourable (U1).
The habitat of the type (colonies nor hunting place) on the area of the Territory of the European Importance would not be directly affected by the implementation of the intention. However, it shall be necessary to assess other impacts with regards to the proximity of the intention in variant 2 (in hunting region and collisions with vehicles in the line of sight, disturbance).

The following table summarized the assessment that is detailed above, i.e. which objects could be influenced by the intention, rendering them subject to further assessment.

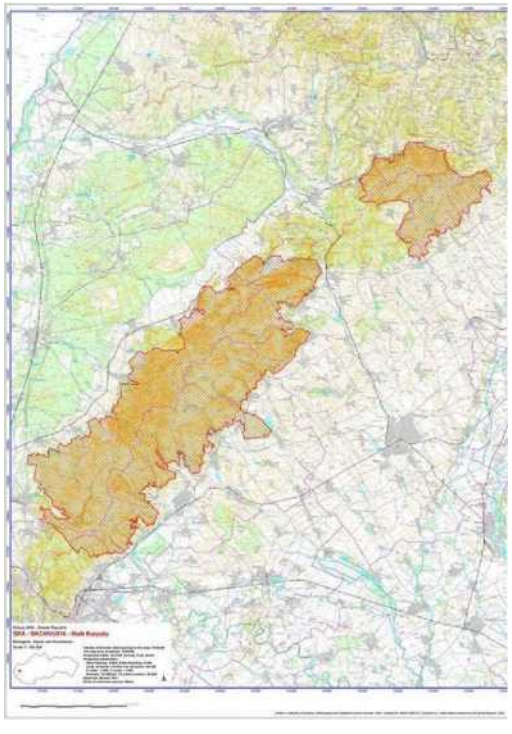
Table 9: **Potential influencing of the protected** objects of ÚEV

lúčky by the intention

Slovak name Ostrovné	**Possible influence by the intention**	(summary)**Justification**
91E0* - Inundated willow-poplar and	**Yes**	**possible indirect influence**
3150 - Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition	**No**	**sufficient distance from the intention**
6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)	**No**	**sufficient distance from the intention**
91F0 - Inundated oak-elm-ash forests alongside lowland rivers	**No**	**sufficient distance from the intention**
Flat Bark Beetle (Cucujus	**Yes**	**influencing of the habitat**
Dragonfly (Leucorrhinia pectoralis)	**No**	**sufficient distance from the**
Stag beetle (Lucanus cervus)	**Yes**	**influencing of the habitat**

Great capricorn beetle (Cerambyx cerdo)	Yes	influencing of the habitat
Kessler's Gudgeon (Gobio kesslerí)	No	sufficient distance from the intention
White-finned gudgeon (Gobio	No	sufficient distance from the intention
Bullhead (Cottus gobio)	No	sufficient distance from the intention
Danube Ruffe (Gymnocephalus baloni)	No	sufficient distance from the intention
Streber (Zingel streber)	No	sufficient distance from the intention
Amur Bitterling (Rhodeus sericeus	No	sufficient distance from the intention
European Fire-bellied Toad (Bombina	No	sufficient distance from the intention
Danube crested newt (Triturus	No	sufficient distance from the intention
Greater Mouse-eared Bat(Myotis myotis)	Yes	possible accidents at the intention,
European Beaver (Castor fiber)	Yes (for Variant 2)	disturbance

III. 2.5. CHVÚ Lesser Carpathians



Characteristics of protected avian territory

The Dunajské luhy protected avian territory was declared by a regulation of the Ministry of Environment of the Slovak Republic no. 216/2005 Coll. as amended, with an area of 50 633.6 ha, located in the territory of districts Bratislava III, Bratislava IV, Malacky, Myjava, Pezinok, Piešťany, Senica, and Trnava.

In the CHVÚ Malé Karpaty, mainly forest habitats within the 1st vegetation (oak) to 4th vegetation level (beech) are abundant. The grassy and herbaceous growth as well as shrubby communities take not so large areas in the marginal parts of the territory and in the valleys of forest complexes. Also the parts of vineyards mainly at the foot of the East slopes of Pezinok Carpathians were included in the CHVÚ. A special habitat of birds is represented by numerous rock formations with rock walls in the mountain range of Pezinok Carpathians.

Table 10: In the Protected Avian Territory (CHVÚ), the following bird species are the subject of protection:

Slovak name	Latin name	Supposed count of nesting pairs1			Count of individuals wintering in the SR
		in CHVÚ[8]	in the SR	in the EU (thou.)	
Saker Falcon	*Falco cherug*	4	19 - 45	360 - 540	10 - 25
European Honey-	*Pernis apivorus*	40	900 - 1300	110 - 160	0
Middle Spotted Woodpecker	*Dendrocopos medius*	300	2500 - 4000	140 - 310	4000 - 10000
White-backed Woodpecker	*Dendrocopos leucotos*	60	1500 - 2500	180 - 550	3000 - 6000
Syrian Woodpecker	*Dendrocopos syriacus*	50	1500 - 2500	530 - 1100	2500 - 5000
Black Woodpecker	*Dryocopus martius*	60	1500 - 2500	740 - 1400	4500 - 6500
Eurasian Eagle-owl	*Bubo bubo*	13	300 - 400	19 - 38	700 - 1000
Black Stork	*Ciconia nigra*	6	400 - 600	7,8 - 12	0 - 2
European Nightjar	*Caprimulgus europaeus*	15	1000 - 2000	470 - 1000	0
Peregrine Falcon	*Falco peregrinus*	3	120 - 150	12 - 25	5 - 10
Collared Flycatcher	*Ficedula albicollis*	3900	70000 - 150000	1400 - 2400	0
Flycatcher Red-breasted	*Ficedula parva*	500	5000 - 10000	1200 - 10000	0
Red-backed Shrike	*Lanius collurio*	1400	65000 - 130000	6300 - 13000	0
Grey-headed	*Picus canus*	100	1500 -	180 - 320	3500 - 6000
Barred Warbler	*Sylvia nisoria*	250	3000 -	460 - 1000	0
Common Quail	*Coturnix coturnix*	50	2000 -	730 - 2400	0
Eurasian Wryneck	*Jynx torquilla*	400	2500 -	580 - 1300	0
Spotted Flycatcher	*Muscicapa striata*	1000	65000 - 150000	6000 - 19000	0
Common Redstart	*Phoenicurus phoenicurus*	600	10000 - 15000	6800 - 16000	0
Common Stonechat	*Caxicola torquata*	1000	30000 - 50000	2000 - 4600	0
European Turtle Dove	*Streptopelia turtur*	600	15000 - 30000	3500 - 7200	0
Eastern Imperial Eagle	*Aquila heliaca*	3	35 - 40	850 - 1400	20 - 50

The Malé Karpaty (Lesser Carpathians) protected avian territory was declared to provide for preservation of habitats of the above species and for their survival and reproduction.

Characteristics of the Affected Parts of CHVÚ Malé Karpaty

The intention assessed herein does not cross the CHVÚ Malé Karpaty; the smallest distance to which it approaches it is in the location of end of the intention (Ivanka - North intersection). This distance is 4.5 km. Variant 1 and 2 are identically routed on these places.

The objectives of protection shall be or may be affected by the intention through the following

[8] 2005 data

impacts: collisions with vehicles in the case of movement of birds outside the CHVÚ.
The other impacts, such as disturbance with noise and increase in the immission pollution of the territory was excluded with regards to the distance from the intention and it was confirmed also by independent studies (noise and immissions study - annexes F.7 and F.8 of the zoning and planning decision documentation).
The assessed intention is connected to the section of the D4 highway, structure Ivanka North, D4, BA Rača - Záhorská Bystrica, that enters the CHVÚ. However, the assessment of that structure is not the purpose of this Appropriate Assessment; it is contained in a separate document. Despite that, it is necessary to consider potential cumulative impacts of both intentions, especially in countryside fragmentation.

The Concerned Subjects of Protection
V The following part lists the basis ecological requirements of protected objects that formed the basis of assessment of their potential endangerment by the intention.

Saker falcon (Falco cherrug)
It inhabits the borders of broad-leaf and mixed forests neighbouring with open terrain in lowlands and uplands. It preys in open country on small and small-to-medium mammals and birds. In the past, it was locally bound in feed to marmot colonies during nesting. After 1945, a strong decrease occurred. Since the 1990s, it slowly started to re-populate the territories that it left.
According to Horák et al. (2006), the feed territory of saker falcons in southern Moravia reaches up to 10 km from its nest; most frequently, it is around 5 km.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
The probability of flying over the intention is relatively high as it preys in open country and the feed territory of the pair nesting in the territory of ÚEV can reach to the intention.

European Honey-buzzard (Pernis apivorus)
A bird of prey with the size of a common buzzard. The honey-buzzard inhabits forests, more frequently in warmer areas. It requires the presence of open areas such as fields, meadows, and pastures. It feeds mostly on wasp larvae that it rips from ground nests. It is migratory, spending winter in the tropical areas of Africa.
According to Gamauf (1999) that monitored the population in Austria, most birds preyed within a 3 km circle around their nests; if feed was abundant, most sightings were within 1 km from the nest. The circuits of honey-buzzard in Central Europe cover as much as 4500 ha and may overlap, with males scouring other individuals of the same species within a circle of 500 m to 2000 m from the nest (Horák, Diviš, 2006).
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
European Honey-buzzard may get above the intention when searching for food. The probability is low.

Middle Spotted Woodpecker (Dendrocopos medius)
The nesting environment is broadleaved, to lesser extent also mixed forests in the lowlands or uplands. In majority of cases they are inundated forests or warm oak forests, sometimes also parks and gardens. The species distribution corresponds with the distribution of Hornbeam, the nesting environment in the mixed forests may include also the other four species - Beech, Elm, Maple and Spruce. However, in particular it is bound to old Oak forests, mainly in inundated forests. Its habitat requirements are specific and so that it could prosper, it needs relatively large areas of suitable stands (several tens of ha). Its food is mainly the insect collection.
The size of nesting region considerably varies - from 3.3 ha up to ca 25 ha. When feeding baby birds, the parents usually pick food in the closest proximity of the hollow, but also from the distance of 300 to 400 m (Horal, 2006).

With regards to the specific demands regarding the environment, its distribution is rather scattered. Recently, we record a moderate decrease in abundance, mainly at the West and North outskirts of the area. The reason of the phenomenon is probably the loss of a suitable environment due to the forest management.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
The occurrence of the species may be rather excluded with regards to the habitat demands in the territory of the intention.

White-backed Woodpecker (Dendrocopos leucotos)
It inhabits broad-leaf and mixed forests, in Central Europe, mostly old beech forests in higher locations. The presence of rotting and/or dry trunks used to build nests, get feed, and vocalize, is important. The main danger for them are modern technologies in forest use. In Western Beskydy mountains and Javorníky mountains, Pavelka (2003) estimates the size of territory to be 8 - 11 he and provides an average density in years 1983 - 1992 as 0.3 pairs/10 hectares.
Non-migratory bird. Outside nesting periods, individual birds wander away from their nesting areas and have been spotted in Slovakia as many as several dozens of kilometres from their nesting areas, usually in higher altitudes.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
The occurrence of the species may be rather excluded with regards to the habitat demands in the territory of the intention.

Syrian Woodpecker(Dendrocopos syriacus)
The nesting environment is warm broadleaved forests, in particular in the lowlands, in Central Europe also gardens, orchards and parks. Its occurrence in Europe is restricted to its South-east part, while it is the most abundant at the Balkans - in Romania and Bulgaria. The western and northern boundary of the area passes through Austria, the Czech Republic and Poland. In first half of the 20th century, it came to a large expansion of the species from Turkey to Europe, when it spread out rather quickly to the described area. It creates rather narrow hybrid zone at the edge, where it comes to the cross-breading with Great Spotted Woodpecker. Nowadays, the enlargement of the area has been probably stopped, however the return of the abundance is still recorded locally.
When feeding the baby birds, their parents collect food from the distance of 300 m in average, however in majority of cases from 50-70 m, as well as 1,000 m.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
The occurrence of the species may be rather excluded with regards to the habitat demands in the territory of the intention.

Black Woodpecker (Dryocopus martius)
It occurs almost on the entire territory of Slovakia, it loves the vast old forest stands, mixed or broadleaved forests at the most. It is widespread from lowlands up to the upper boundary of a forest. It occurs abundantly also in the inundated forests. Distribution in winter is identical with the nesting distribution in practice. It leaves forest occasionally.
The stable bird, however wandering is characteristic for some individuals. The flights, sometimes to distant places, are carried out by young birds in their 1st year of life. It nests in cavities carved out by it. It feeds almost exclusively on insects living in woods, pecking them out from the bark in summer and in winter alike. Due to the feed specialization, individual pairs have relatively large nesting areas. Densities in the territory of the Czech Republic vary from 2 pairs/10 ha to 1 pair/km (Hudec, Šťastný a kol. 2005).
The cavities after the Black Woodpecker are occupied by a lot of bird species (the most important ones are the forest owl species), therefore its occurrence is very important or the owl species and the overall variety of nesting bird species.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
The occurrence of the species may be rather excluded with regards to the habitat demands in the territory of the intention.

Eurasian Eagle Owl (Bubo bubo)
It is a stable species in Slovakia that prefers the forest areas in the middle locations neighbouring with pen areas, where it flights for a hunt. The results show that the young birds ma fly to the distance of 50 km in their first year of life, the birds could be found as far as at the distance of 100 km from the nest within further three years. The more significant flights of the birds in autumn and winter period are not visible from the result of bird ringing.
The size of domestic district changes within a year, as it is proved by the results of telemetric surveys.. During telemetric monitoring of owl pairs in Lower Austria subalpine region, Ledignitz (1992) concluded that the movements of pairs of owls have not exceeded the distance of 7.5 km from their nests in the period of December - end of nesting. Both telemetry and feed analyses have proven that nesting regions of owls overlapped.
They prey mostly above free areas in forests, either from a low flight or from a viewing location. The period of preying is variable, however, mostly concentrating on dawn and dusk. When looking for prey, it uses mostly hearing; this is why his prey is usually the more noisy animals (Hudec, Šťastný et al., 2005). It is not a problem for the owl to fly to preying locations distant 10 km from the nesting area (Hudec, Šťastný et al., 2005). Nests are usually on cliffs, on forest slopes, or on the ground under downblown trees, rarely in large old tree nests of birds of prey, egrets or storks. It is able to use various environmental type, from deserts to Nordic coniferous forests. The basic condition is a possibility to hide in rocks, cliffs, or even smaller forests. It may adapt to secondarily created locations, e.g. in stone mines, on castle ruins, even in vicinity of humans.
Population trend in Slovakia is stable, the population trend in the EU is stable (BirdLife Slovakia).
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying for feed to the area of the intention cannot be completely excluded; however, it will probably not use the feed habitats nearby the intention.

European Nightjar (Caprimulgus europaeus)
The nesting environment of European Nightjar is sparse coniferous - in particular Pine - and broadleaved forests, usually on the sandy soils. It avoids dense forests. The presence of open areas and their edges, belts, clearings and glades is important. It is naturally moorland or peatbog. Less frequently, they nest in bushy, sun-covered inclinations or other similar sites. It is a night bird, preying for insects using a wide-open beak. The feed area has a diameter of approx. 3 km, however, cases of nightjars flying as far as 7 km for feed are known. Nightjars nest throughout the continent with the exception of larger non-forest areas such as the Arctic or Alpine tundra and intensively agriculturally used land.
It is a migratory bird. In the Western Europe, it occurs in islands; most of its presence is in the Mediterranean and in Eastern Europe. Since the middle of the 20th century, a relatively significant decline has occurred, especially in the western part of the area. The main causes of decrease of the population of the European nightjar are considered to be the loss of suitable nesting habitats and loss of feed due to use of pesticides. The sufficiency of feed is one of the key factors influencing the selection of habitats by bird populations and may influence the distribution and numbers of the populations of the European nightjar in the locations it prefers. Ornithologists generally agree that the highest number of deaths of nightjars is due to road traffic. The highest losses occur between August and September when especially young, inexperienced individuals die (from mid-June until the end of migration, the ratio of dead young and old individuals is 5:1). During migration, most nightjars die when they rest at night or warm roads (Šimeček et al., 2004).
Population trend in Slovakia is stable, the population trend in the EU is a slight decrease (BirdLife Slovakia).

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Considering the habitat requirements, flying for food to the intention is relatively improbable. If individuals flew from the CHVÚ to the intention, this will mostly be related to the Súr wetlands.

Black Stork (Ciconia nigra)

It inhabits forests, both alluvial and broad-leaf, mixed, and coniferous, from lowlands up to an elevation of approx. 1,000 m. It feeds on the sides of water dams or small brooks, covered by vegetation if possible. It catches fish up to 25 cm size, in addition to them also water insects, frogs and newts. In the areas with wet meadows, it feeds mainly on grasshoppers, in addition to it also on frogs, rodents and baby birds. It gets food from places up to the distance of 10 km from its nest. According to the sightings of the African Oddysey project, it can fly for food up to 20 kilometres from the nest. It searches for peaceful and hidden places, it avoids human settlements.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Considering the habitat requirements, flying for food to the intention is improbable. If individuals flew from the CHVÚ to the intention, this will mostly be related to the Little Danube river.

Peregrine falcon (Falco peregrinus)

A migratory species that nests in cliffs, nests of other birds of prey, and even on tall buildings. Nesting on buildings and other structures is becoming increasingly frequent. Despite being the most frequent in mountainous areas, it is not a mountain bird. Falcons do not avoid lowlands and will even nest in alluvial forests. Pairs use their nests for many years. The only prey on flying birds up to the size of a duck, most frequently pigeons, in free territory outside forests. By flying just above the ground, they attempt to force other birds to fly up; alternatively, they try to separate an individual from a flying flock of birds. In numerous European countries, their populations have slightly risen.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
We cannot exclude the possibility of occurrence in the proximity of the intention (the possibility of flying in for food).

Collared Flycatcher (Ficedula albicollis)
In Slovakia, it is present from lowlands up to altitudes of 1000 - 1200 m, preferring lower locations. Migrating, arrives in April, leaves in September. It lives in parks, gardens, broadleaved forest, in particular Beech forests.
It nests in the hollows and semi-hollows of trees. The beginning of nesting is in May. It hunts for insects mostly in the shaded crowns of trees where it lurks hidden between the leaves. Usually it does not return to the original location from which it started preying. Similarly to the European pied flycatcher, it rarely sits on open solitaire locations. It is a solely insect-feeding species collecting prey up to 150 m from its nest, usually, however, in a range of only 30 m.
It is a migratory species ariving in April and May and leaving in August and September.

Population trend in Slovakia is stable, the population trend in the EU is a slight growth (BirdLife Slovakia). The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of the species from the CHVÚ to the territory of the intention is improbable.

Red-breasted flycatcher (Ficedula parva)
It is a migratory species nesting in broad-leaf, mostly beech forests. It nests in cavities, thus requiring a certain share of old trees in forests. It feeds mostly on small insects, in autumn also on small berries. The population seems to be stable but in certain countries, decreasing numbers have been recorded, e.g. in Austria, Lithuania, and Finland. The species can be endangered by a decrease of the number of nesting opportunities in old beech forests.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of the species from the CHVÚ to the territory of the intention is improbable.

Red-backed shrike (Lanius collurio)
It is migratory, stays for the winter very rarely. In Central Europe, it inhabits steppe inclinations, various bushy habitats, borders of forests, and glades. It nests from lowlands up to relatively high mountainous areas (up to 1200 m). It peaks its prey on spines of bushes or barbed wire. The prey is formed mostly by large insects, e.g. beetles, bumble-bees, and grasshoppers, even squab chicks and small rodents and insectivore. However, it also feeds on various fruits (e.g. cherries, berries).
In suitable locations, shrikes nest in relatively high densities (up to around 5 pairs/10 ha). In the Českomoravská vrchovina mountains (Czech Republic), the territory size was in pastures and meadows some 2 000 -3 000 m2, on boundaries in field cultures and around field roads 5 000-10 000 m^2 (Kunstmuller 1998). Boháč (1965) has identified feed areas in the Chotebor region for three 2 2 2 nests: 2 x 1 400 m and 1 x 1 100 m ; the density in the territory was 3 pairs/1 km .
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
Flying of the species from the CHVÚ to the territory of the intention is improbable.

Grey-headed Woodpecker (Picus canus)
Non-migratory bird. Outside the nesting period, it wanders around nesting areas. The autumn wandering of old birds and spreading of young ones rarely exceeds 15 km. The nesting area in Slovakia is in forests of all types; they are also present in gardens and parks. The density varies by the quality of forest between 0.2 pairs/10 ha to 1 pair/10 ha (Hudec, Šťastný et al. 2005). In exceptional cases, nesting density may reach up to 10 pairs/km2 (Horal, Hora, 2006).
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).

Considering the habitat requirements, the occurrence of the species can be relatively well excluded in the territory of the intention.

Barred Warbler (Sylvia nisoria)
It inhabits bushy inclinations and pastures, borders of forests in drier, sunny locations. Actively seeks the presence of the red-backed shrike (mutual benefits in better warning of dangers). The main part of feed is formed by insects and its larvae that it picks mostly from branches of bushes.
Nesting densities in suitable habitats may reach up to 5 pairs/10 ha (for more quantitative data, see Šťastný et al., 2006); in exceptional cases in Pálava, up to 25 pairs/10 ha.
In the European territory, it is a migratory species.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of the species from the CHVÚ to the territory of the intention is improbable.

Common Quail (Coturnix coturnix)
The quail is our only migratory gallinaceous bird. It arrives from its wintering locations in Northern and tropical Africa and the countries around the Mediterranean at the end of April and in May. To higher altitude areas, only in June. Immediately after the arrival, males fight for their territories with approximate sizes of 0.7 - 1.5 hectares.
The original environment were steppes and forest steppes. At present, it inhabits open country with fields and meadows, nesting mostly in grain fields, clover, meadows and non-cut grass - wherever the vegetation provides sufficient coverage.
It is spread in Europe from Iceland and Scandinavia up to the Mediterranean. In the previous century, the populations have diminished substantially; at present, its population is generally seen

as stabilized.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of the species from the CHVÚ to the territory of the intention is improbable.

Eurasian Wryneck (Jynx torquilla)
Migratory species seeking for dry and sun-covered locations. Thus, it prefers open, extensively used country with small forests, groups of trees, alleys, and other types of structural verdure, open broad-leave and coniferous woodlands, and more rarely, pine and spruce-and-pine forests, especially their borders and glades. It collects its feed usually on the ground, feeding mostly on ants (adults and larvae). It has a palearctic presence, inhabiting almost the entire Europe and a stripe crossing the middle of Asia up to the Sakhalin and Japan. From the beginning of the 20th century, numbers have started to decrease rapidly in several countries of the Western Europe, and the trend gradually spread over almost all of the Western and Northern Europe, as well as a number of Central and Southern European countries. The population in Eastern Europe seems to be stable, although the counts in Russia are not known.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
Flying of the species from the CHVÚ to the territory of the intention is improbable, only occasionally during migration.

Spotted Flycatcher (Muscicapa striata)
A migratory species inhabiting alleys of old trees and lines of trees alongside water flows. It can be regularly found in loose old forests (more in broad-leaved), parks, orchards, and gardens. In the mountains, it inhabits meadow enclaves with grown trees.
It feeds mostly on adult flying insects (most frequently dipterans and butterflies). The highest nesting densities are achieved in parks and other urban verdure, up to 11.1 pairs/ha. The size of feed area is 675 - 1 800 m2 (Šťastný, Hudec et al., 2011).
The nesting region spreads around the entire Europe, north-west of Africa, and south-east Asia. The numbers of flycatchers have decreased continuously since the beginning of the 1960s.
V In the last decade of the 20th century, its counts have been stable and/or increasing. Population trend in Slovakia is stable, the population trend in the EU is a slight decrease (BirdLife Slovakia).
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of individuals from the CHVÚ to the territory of the intention is improbable.

Common Redstart (Phoenicurus phoenicurus)
A migratory species nesting in lighter forests of various types, borders of forests, and gardens. Availability of tree cavities is important. The nesting territory includes broad-leaved and mixed forests with old trees with numerous cavities, old parts, cemeteries, and shaggy gardens. The common redstart prefers tree cavities to wall flaws. From April, males steadily sign and seek for a suitable location for a nest.
The nest is usually located in a tree cavity with an oval inlet opening, vertical size larger than horizontal, or in a bird box. The nesting density usually does not exceed 2 pairs/10 ha (Hudec, Šťastný et al., 2005).
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - less favourable (U1).
Flying of the species from the CHVÚ to the territory of the intention is improbable, only occasionally during migration.

Common Stonechat (Saxicola torquata)
A migratory species inhabiting dries grass vestures. It nests mostly in lower positions on ruderal surfaces, in ditches and vineyards. Outside regular nesting areas, it may appear especially on various formerly ruderalized areas such as military training fields, piles, stacks, dumps, etc. Data

about nesting density is insufficient, however, the density tends to be up to 1 pair/10 ha.
It feeds on small insects (all developmental stages), molluscs, rarely on various berries. The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of the species from the CHVÚ to the territory of the intention is improbable, only occasionally during migration.

European Turtle Dove (Streptopelia turtur)
A migratory species that most frequently inhabits country with forests, lanes of bushes, windbreaks, bank scrubs at water and other types of structural verdure in fields and meadows, forest borders, and young grown forests. The turtle dove flies to open areas to collect its feed, formed by seeds of weed and cultural plants. It collects it from the ground, especially on fields, grass areas, etc.
The nesting density, in young forests and light broad-leaved forests is usually around 1 pair/10 ha.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).
Flying of individuals from the CHVÚ to the territory of the intention is improbable.

Eastern Imperial Eagle (Aquila heliaca)
The Eastern imperial eagle is mostly a lowland species; however, in Slovakia, in has inhabited mostly middle and higher locations since the beginning of its presence (since 1945). The nesting environment of the Eastern imperial eagle are broad-leaved forests on the inclinations of not-tall mountains (most frequently up to 850 m) connected to vast lowlands used for preying. Most nests have been found in forests of lower locations; eagles choose mostly broad-leaved (beech) but frequently also coniferous trees.
V In the following years, its nesting has extended to lowlands with agrocenoses, most frequently nesting in windbreaks, field forests, or on solitary trees. Its feed territories are open areas, especially in agricultural land. It feeds mostly by mid-sized mammals, it can only prey on medium-sized birds and mooch on carcasses. It is assumed that most birds hit on road flew there in order to mooch on carcasses. The data about food territories from the Malé Karpaty mountains mention flying to distances of 10 km from the nest (Hudec, Šťastný et al., 2005).
Most of our individuals, especially adult birds, spend winters in the Carpathian Fold (of the Pannonian Basin) close to its feed territories. Immature individuals migrate especially to the south of the Balkan peninsula (to Greece, Albania), or as far as Israel.
The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).
Due to the ecology of the species, there is a high probability of flying over the intention.

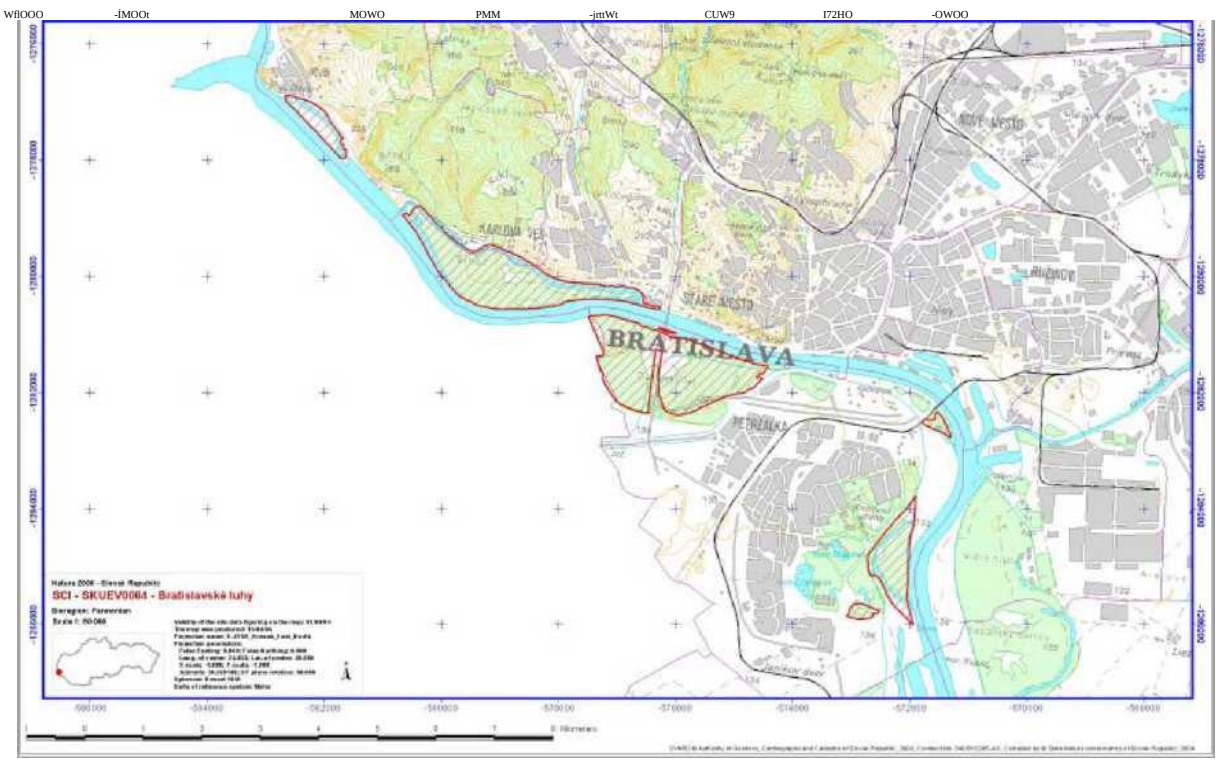
The following table summarized the assessment that is detailed above, i.e. which objects could be influenced by the intention, rendering them subject to further assessment.

Table 11: Potential influence of protected objects in CHVÚ Malé Karpaty by the intention (probable presence of individuals residing in in the territory of the assessed intention) summary):

Slovak name	Possible influence by the intention	Justification
Saker Falcon	Yes	hunts in an open countryside, large food territory
European Honey-buzzard	Yes	possible flying in for food
Middle Spotted Woodpecker	No	flying above the intention little probable, extraordinary in the period of winter wandering
White-backed Woodpecker	No	different habitat demands
Syrian Woodpecker	No	flying above the intention little probable, extraordinary in the period of winter wandering
Black Woodpecker	No	flying above the intention little probable, extraordinary in the period of winter wandering
Eurasian Eagle-owl	Yes	possible flying in for food to the area of interest
Black Stork	No	flying above the intention less probable, different habitat demands
European Nightjar	No	flying above the intention less probable, different habitat demands
Peregrine Falcon	Yes	possible flying in for food
Collared Flycatcher	No	different habitat demands and small size of the territory
Red-breasted Flycatcher	No	different habitat demands and small size of the territory
Red-backed Shrike	No	small size of the territory
Grey-headed Woodpecker	No	flying above the intention little probable, extraordinary in the period of winter wandering

Barred Warbler	No	small size of the territory
Common Quail	No	small size of the territory
Eurasian Wryneck	No	different habitat demands and small size of the territory
Spotted Flycatcher	No	different habitat demands and small size of the territory
Common Redstart	No	small size of the territory
Common Stonechat	No	small size of the territory
European Turtle Dove	No	small size of the territory
Eastern Imperial Eagle	Yes	hunts in an open countryside, large food territory

III.2.6. ÚEV Bratislavské luhy



The territory established by the Decree of the Ministry of Environment of the Slovak Republic No. 3/2004-5.1 of 14 July 2004 setting the national list of the territories of the European importance.

It spreads out on the cadastral territories of Devín, Karlova ves, Petržalka.

The Characteristics of the ÚEV

The territory is covered with valued stands of willow-poplar and oak-elm and ash inundated forests with the occurrence of many old trees of a unique ecological value. Forest management took place here only to a limited extent. In addition to the inundated forests, we can find there also the remnants of forest steppes or important plant communities of dead water and water courses.

The Protected Territory of the European Importance (ÚEV) Bratislavské luhy was declared for the purpose of the protection of the following subjects of protection:

Habitats (* designates priority habitat)
91E0* Inundated willow-poplar and alder forests

3150 - Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type
3260 Lowland to montane water curses with the vegetation of Ranunculion fluitantis and Callitricho- Batrachion association
91F0 Inundated oak-elm-ash forests alongside lowland rivers

Species:

Flat bark beetle	*(Cucujus cinnaberinus)*
Bullhead	*(Cottus gobio)*
priadkovec trnkový	European Fire-bellied Toad (Bombina bombina)
roháč obyčajný	*(Eriogaster catax) (Lucanus cervus)*
ohniváčik veľký	*(Lycaena dispar) (Barbastella barbastellus) (Myotis myotis)*
uchaňa čierna netopier	*(Myotis dasycneme) (Rhodeus sericeus amarus) (Maculinea teleius)*
obyčajný netopier	*(Unio crassus)*
pobrežný lopatka	*(Zingel streber)*
dúhová modráčik	*(Gobio kessleri) (Dioszeghyana schmidtii) (Leptidea morsei) (Leucorrhinia*
krvavcový korýtko	*pectoralis) (Gymnocephalus baloni) (Gobio albipinnatus)*
riečne kolok	*(Triturus dobrogicus) Marsh fritillary (Euphydryas aurinia) Water beetle*
vretenovitý hrúz	*(Graphoderus bilineatus)*
Kesslerov mora	Golden spined loach *(Sabanejewia aurata)*
Schmidtova mlynárik	European Beaver *(Castor fiber)*
východný vážka	
hrebenačka vysoká	
hrúz bieloplutvý mlok	
dunajský	

The Characteristics of the Concerned Parts of the ÚEV Bratislavské luhy

None of the variants directly interfere with the ÚEV, both of them just pass by the location to the South at the distance of ca 2 m (variant 1) or 2.8 km (variant 2).

The subjects of the protection of ÚEV thus may be with regards to the distance from the intention affected by collisions with cars on the intention The other impacts (environment pollution, disturbance, turbidity, restriction of migration, etc.) were excluded due to the distance from the intention, the implementation of the intention on a high bridge and the position of the territory against the river flow.

The Concerned Subjects of Protection

Species moving by air to relatively long distances (at least 2 km) were identified as affected. It is also necessary to consider the fact that above the Danube, where the route is closest to the ÚEV, the brides have a passing height of around 17 m. In the left-bank

verdures, it is at least 5.5 m. This is why only bats are considered as protected objects. The remaining protected objects are not evaluated further.

Greater Mouse-eared Bat (Myotis myotis)

Reproduction colonies are bound to attic premises, more rarely to underground premises; they spend winters in underground premises. The hunting regions are in various forests.
The assessment of the condition of the species from the point of view of protection in the Pannonian region pursuant to Article 17 of the directive 92/43/EC - less favourable (U1).
The habitat of the type (colonies nor hunting place) on the area of the Territory of the European Importance would not be directly affected by the implementation of the intention. However, it shall be necessary to assess the indirect impacts with regards to the proximity of the intention in variant 2 (collisions with vehicles in the line of sight, disturbance).

Barbastelle (Barbastella barbastellus)

The reproduction colonies occur in the hollows of trees, however we can find them also behind the window frames, in hunter´s high seats, etc. They winter in the underground places. Barbastelle preys on its feed (small butterflies and dipterans) in forests, alongside forest borders, and above waters.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (XX).
The habitat of the type (colonies nor hunting place) on the area of the Territory of the European Importance would not be directly affected by the implementation of the intention. However, it shall be necessary to assess the indirect impacts with regards to the proximity of the intention in variant 2 (accidents in the line of sight, disturbance).

Pond Bat (Myotis dasycneme)

V In the summer period, it inhabits swamp areas in lowlands with abundance of dead and slow-flowing waters and preys for its feed above them. Summer colonies of females can be found in attics, sometimes also in tree cavities; males and young animals live in bird boxes and bat boxes. The species makes long transfers to wintering locations.
The assessment of the condition of the species from the point of view of protection pursuant to Article 17 of the directive 92/43/EEC - unknown (XX).
The habitat of the type (colonies nor hunting place) on the area of the Territory of the European Importance would not be directly affected by the implementation of the intention. However, it shall be necessary to assess the indirect impacts with regards to the proximity of the intention in variant 2 (accidents in the line of sight, disturbance).

Table 12: Possible influence of the subjects of protection of the Territory of the European Importance Bratislavské luhy (summary):

Slovak name	Possible influence by the	Justification
91E0* - Inundated willow-poplar and alder forests	No	sufficient distance from the intention
3150 - Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type	No	sufficient distance from the intention
3260 Lowland to montane water curses with the vegetation of Ranunculion fluitantis and Callitricho- Batrachion	No	sufficient distance from the intention
91F0 - Inundated oak-elm-ash forests alongside lowland rivers	No	sufficient distance from the intention
Flat bark beetle	No	sufficient distance from the intention
Bullhead	No	sufficient distance from the intention

European fire-bellied toad	No	sufficient distance from the intention
Eastern eggar	No	sufficient distance from the intention
Stag beetle	No	sufficient distance from the intention
Large copper	No	sufficient distance from the intention
Barbastelle bat	Yes	potential collissions on the intention
Greater mouse-eared bat	Yes	potential collissions on the intention
Pond bat	Yes	potential collissions on the intention
Amur bitterling	No	sufficient distance from the intention
Scarce large blue	No	sufficient distance from the intention
Thick shelved river mussel	No	sufficient distance from the intention
Streber	No	sufficient distance from the intention
Kessler's gudgeon	No	sufficient distance from the intention
Hungarian quaker	No	sufficient distance from the intention
Fenton's wood white	No	sufficient distance from the intention
Dragonfly	No	sufficient distance from the intention
Danube ruffe	No	sufficient distance from the intention
White-finned gudgeon	No	sufficient distance from the intention
Danube crested newt	No	sufficient distance from the intention
March fritillary	No	sufficient distance from the intention
Water beetle (Graphoderus	No	sufficient distance from the intention
Golden spined loach	No	sufficient distance from the intention
European Beaver	No	sufficient distance from the intention, no impact on migration

IV. ASSESSMENT OF IMPACT OF INTENTION ON CHVÚ AND ÚEV

IV. 1. Evaluation of completeness of data for assessment

The documents used for the assessment were:

- Evaluation report "D4 Jarovce - Ivanka North Highway" and its annexes (Noise and Dispersion Study). Geoconsult 2010.
- Zoning permit documentation of the intention (Dopravoprojekt Bratislava, 2014).
- The Feasibility and efficiency study for D4 Bratislava Jarovce - Ivanka North - Stupava South - nat. border SK/A, Dopravoprojekt Bratislava, 2009
- Natural surveys performed during the elaboration of the assessment (March - September 2013) - HBH Projekt, spol. s r.o.
- Mapping of habitats of Dunajské luhy in the routes of variants of the D4 highway (Well Consulting, 2013)
- Surveys prepared in the previous phases of project preparation of the intention. These

documents were accepted as sufficient for the preparing of the "Appropriate Assessment".

IV. 2. The Possible Impacts of the Intention and the Assessment of their Importance for the Subjects of Protection

The identified impacts come inter alia from the data and conclusions specified in the chapters II.2. Data on Inputs and 11.3 Data on the Outputs The impacts, when feasible, also include cumulative impacts and synergic impacts.

The following text also presents the assessment using the following scale. Significance of individual levels is as follows (Methodology of the Czech Republic): _____

Value	Term	Description
-2	Significant negative impact	A significant negative impact is an unfavourable consequence for the compactness of the location in relation to the assessed type of European site or species with European significance. It excludes the implementation of the intention (or, intentions can only be implemented in certain cases). Significant disturbing to liquidating impact on the site or species population or a substantial part thereof, significant disturbance of the ecological requirements of the site or species, significant interference with the habitat or with natural development of the species. Results from the intention assignment, it cannot be eliminated.
-1	Moderate negative impact	Limited/moderate/insignificant negative impact Moderate negative impact means the unity of the location in relation to such a site or species would not be impaired. The implementation of the intention is not excluded. Moderate disturbing impact on the site or species population, moderate disturbance of the ecological demands of the site or species, marginal interference with the habitat or the natural development of the species. It is possible to eliminate it using the proposed mitigating measures.
0	Zero impact	The intention has not provable impact.
+	Positive impact	Positive impact on the site or species population, the improvement of the ecological demands of the site or species, favourable interference with the habitat or the natural development of the species.

IV. 2.1. Variant 1 - Red

IV. 2.1.1. Impacts on CHVÚ Dunajské luhy

The subjects of protection in the CHVÚ Dunajské luhy shall be affected in particular by the following impacts:

- Seizure (direct interference with the habitats)
- Noise and light disturbance
- The increased visit rate in the location at the left-side cycling route in the inundated forests (disturbance)
- Collisions with vehicles
- Environment pollution (the changes in the immission characteristics, water environment pollution).

The size of the above given impacts is assessed bellow, for the period of construction (implementation) and the operation (as long as the impact applies). In the period of the preparation of the construction it would be possible to suppose mainly the increased movement of people in the territories for the purpose of surveys and small activity (e.g. survey drilling, seizure survey, etc.). The main negative impact is in this case the disturbance that shall not be significantly negative. This is the one-shot short-term impact.

a) Seizure (direct interference with the habitats)

The impact that shall commence in the period of construction and shall persist till the operation

period.

This variant passes through the CHVÚ in its North part, in particular the upper part of Hrušovská zdrž Dam, where the entire inundation part is not permanently flooded. The area permanently taken by the red variant is 11.13 ha, or 0.067% of the total area of the CHVÚ. In total, there are the habitats suitable for occurrence or nesting of any of the subject of protection in the entire area.

The intention crosses the entire territory of the CHVÚ on a series of bridges with noise reduction walls on both sides. These walls form an integral part of the intention in the zoning permit documentation. However, forest habitats under the bridges will be destroyed, and trees cut. Under the bridges on the left-bank forests, a cycling route/service route with a width of 6 m is planned, most probably asphalt-covered.

With regard to rather large clear height (min. 5.5 m, max. 19 m) we may suppose the gradual re-growth in the part of the area with vegetation. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of Measures).

Water areas under the bridges shall be affected only on the place of the construction of the pillars in water course. The remaining parts of the water course under the bridges shall be untouched by the construction.

For the species that do not have feeding and nesting habitats in the territory affected by the construction, the impact of seizure was assessed as zero,, in both implementation and operation period. The following species are concerned: Common Redshank, Tawny Pipit, Sand Martin and Mediterranean Gull. The majority of the subjects of protection uses the territory as feeding territories or gathering places (migrating and wintering species). The loss of habitats is in this case with regards to the minimum area (0.067%) within the CHVÚ significant and the impact was assessed as moderately negative (-1), in both implementation and operation periods. The following bird species are concerned: Western Marsh-Harrier, Common Tern, Little Egret, Common Pochard, Tufted Duck, Common Goldeneye, Smew, migrating species of water birds creating groups during migration or wintering, in particular the birds named in Annex 1.

In the surroundings of variant 1, nesting habitats of the following species are located:
Common kingfisher - according to an ornithological survey (Kúdela, Melišková, Littera, 2011), 4 nesting pairs were found in a wider territory of the intention in 2011. However, no pairs were found directly in the route of the intention where the risk of destroying of a nesting location would exist. For this species, liquidation of habitats in the area of the intention was thus evaluated as slightly negative (-1) both during implementation and during operation.
Little bittern - while the ornithological survey (Kúdela, Melišková, Littera, 2011) did not find it in the territory, both banks have habitats potentially suitable for the nesting of this species. While the most suitable reed habitats were destroyed during the construction of houseboats and waterside adjustments, future nesting of the bittern cannot be excluded. For this species, liquidation of habitats in the area of the intention was thus evaluated as slightly negative (-1) both during implementation and during operation.
Gadwall, garganey, red-crested pochard - in the taken area, habitats that can potentially be used by the species as nesting locations exist (the Biskupické arm). This is why liquidation of habitats has been evaluated as slightly negative (-1) for these species.
Black stork - according to the ornithological survey (Kúdela et al., 2011), in the vicinity of variant 1, probably 1 pair of black stork regularly nested until 1995; at present, the nesting population is on its minimum (1 nesting pair in the CHVÚ), however the population seems to have grown recently. In such a case it would probably came to the re-settlement of the area. The nesting places of the species are rather rare and therefore they require a strict protection. For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.
Black kite - in the past, a part of the CHVÚ around the intention was a regular nesting location of this species. Currently, it nests only irregularly, however it occurs every year. Since the decrease in the species took place in the entire territory of the Slovak Republic (unfavourable condition of species - U2), from the national point of view, the territory still remains the significant location of the species and we may suppose that as long as the Danube population starts again raising, the birds shall occupy the former territories in the area affected by the construction (Kúdela, Melišková, Littera, 2011). The nesting places of the species are rather rare and therefore they require strict protection. For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.
White-tailed Eagle - the contemporary nesting population of the species in the CHVÚ is 4 pairs (2006 - 2011). It is the greatest nesting place of the species in Slovakia. One pair nests in the territory directly affected by the construction of the intention, which is 1/4 of the overall population in the CHVÚ. The above data imply the nesting places of the species are very rare and therefore they require strict protection. For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.

b) Noise and light disturbance

Impacts that will be present in different levels during construction and during operation.
As the protected object include no bird species that are active mostly at night and the territory will partially be shaded by noise walls, it is possible to conclude that light disturbance both during the construction and during operation will have only slightly negative influence (-1).
Noise disturbance in the construction period will be of a temporary nature only and not continuous, reducing the level of effects on the protected objects. In addition, construction works can be planned in advance according to the needs of protection of individual species. This is why noise during the construction of variant 1 can be evaluated as slightly negative (-1).
In the operating period, however, the noise disturbance situation is different (see Chapter II.2). Strong noise will become almost continuous. Noise disturbance will be partially eliminated by the

installation of noise walls that form an integral part of the project at the zoning permit level. According to the Noise Study (Annex no. F.7 to the zoning permit documentation), the 45 dB equal loudness line will be in a distance of 500 m - 1 km from the axis of the intention at night in 2030. During the day, the 50 dB equal loudness line is in a distance of 500 m to 1 km from the axis of the intention. Large distances (around 1 km) were only calculated in the area of Jarovecké Danube arm where noise is combined with the noise from the Rusovce interchange. In the location of crossing of the Danube and in left-bank forests, the distances are 500 m (45 dB/night) and 500 m (50 dB/day).

These noise levels (around 45 dB) seem, according to the current knowledge, to be suitable for the determination of the limit of significant disturbing impact (for higher noise levels, an increased percentage of abandoning of the territory by individual species exists) (Reijnen et al., 1995).

As long as we count the area significantly affected by the increase in noise during the operation of the intention, we shall get the number 336.9 ha (night), or 276.6 ha (day), which makes 2.04 % (night), or 1,68 % (day) of the overall area of the CHVÚ. The percentage applies to the species using all of the affected habitats (e.g. nesting places, feeding habitats), thus the forest habitats in Biskupické luhy and water areas and inundation of the Danube River. These species are Black kite, White-tailed eagle.

In the case of species using mainly the forest stands of Biskupické luhy, the significant extent of disturbance shall affect ca 143.9 ha, i.e. approximately 1.7% of the type of environment within the CHVÚ. This regards mainly Black Stork.

The rest of the species uses, to a smaller or greater extent, the floodplain territory of the Danube, the flow of the Danube and the adjacent wetlands, as well as fields and meadows in the CHVÚ (western marsh-harrier, little egret, Mediterranean gull, sand martin, common tern, ducks, migratory species of water birds). Noise will significantly impact 195 ha of the area, or 2.00% of the type of environment within the CHVÚ. The CORINE Land Cover 2006 - 2012 (Slovak Environmental Agency) was used to calculate the areas of individual types of coverage of the country.

These percentages are relatively high considering the fact that the protected objects are bird species that are sensitive to increases of disturbance. While most birds is capable of certain adaptation, it is more than probable that this area, significantly affected by noise, will lose the value of a nesting habitat for some of the bird species. However, they can still partially use them as feeding territories.

This percentage of the CHVÚ that will be significantly influenced by noise from the operation on the highway is at the limit of bearability. It is necessary to focus on reduction of other disturbance sources that could, in combination with the noise, cause a permanent abandonment of a relatively large stripe of land (approx. 1 km wide) in the middle of currently valuable (for feed and nesting) habitats of alluvial forests (e.g. disturbance by increased visiting of the territory).

If the limit is not exceeded (see above), the noise during operation of variant 1 can be evaluated as slightly negative (-1).

c) Increased visit rate in the location

The left bank of the Danube is currently hard to access and thus is not visited frequently. However, the intention also includes the connecting of the left-bank and right-bank cycle route by bridges on the D4. A lane for pedestrians and cyclists will separate from the bridge. Thus, justified fears exist that the visit rate of the left bank will increase significantly, bringing disturbance not only in the bank area but also in alluvial forests that were previously visited very little and that provide refuge to species that are disturbance-sensitive (e.g. black stork, white-tailed eagle, black kite). There is a risk that increased visit rate will force these sensitive species out of their currently inhabited habitats.

In addition, the zoning permit documentation also contains a cycling route/service route with the width of 6 metres that should link the cycling route on the left bank of the Danube with the territory under the bridges and lead throughout the entire territory of floodplain forests up to km 5.500. Here, the bridges end and the service road connects to the local field road. The road should

be asphalt-covered and provide for the movement of cyclists and in-line skaters. This service road was not included in any of the variants in the EIA Report. It is necessary to be aware that presence of individual persons directly in the location has a more significant disturbing effect on most animals than cars driving on a bridge over the location.
The existence of such foreseen service road will generate a significant increase of the risk of disturbing of bird species in immediate vicinity of the highway (people often lack discipline).
The construction of the proposed cycling route under the D4 bridges will result in an increased movement of cyclists and inline skaters on the left-bank cycling route on the embankment of the Gabčíkovo dam. From this cycling route, entry to forests (Biskupické luhy) is only possible by two bridges over the seepage channel in a section of approx. 10 km, or in the section above the seepage channel (closer to Bratislava). The proposed service road/cycling road under the bridge may be connected in km 5.500 to existing field roads, yet the dispersion of cyclists and in-line skaters further to south-east or to forests is not expected due to the unfavourable quality of field roads and low attractivity of the area. The strongest growth of the number of persons due to the connecting of both cycling routes and the construction of the service road/cycling route under the bridge on D4 can be expected on the left-bank embankment that will become easier to access for the inhabitants of Bratislava thanks to the bridging of the Danube by the D4 highway.
The impact of increased visit rate to the location as an indirect consequence of implementation of the intention has been evaluated as slightly negative (-1).

To reduce negative impacts of increased visit rate, we further propose the measure specified in Chapter V. This involves the construction of a system of barriers preventing from non-permitted driving into the territory of the CHVÚ Dunajské luhy on both sides of the Danube. We also propose to ban locating refreshment stands alongside the entire left-bank cycling route in the territory of CHVÚ Dunajské luhy so that the duration of stay of the visitors in the vicinity of CHVÚ is minimized.

d) Collisions with vehicles

Collissions of birds with construction machinery in the construction period can be seen as improbable, its impact was evaluated as 0.
Impact shall be manifested in particular during the operation.
The protected objects can be divided into several categories depending on the frequency of passage over the territory of the intention. Species living in a relatively small territory and bound to a specific habitat (e.g. little bittern, common redshank, tawny pipit, common kingfisher) will fly over the body of the expressway especially in the migration period (if they migrate). In these flyovers, the risk of collision with passing vehicles is low. The risk of collisions only exists during reduction of fight altitude, e.g. in order to rest. The altitudes identified by radar during migration vary between 200 and 7000 m for various species. For example songbirds fly at 1000 - 2000 m at night and 200 - 300 m during the day (Veselovský, 2001). The risk of collision with passing vehicles is defined by the maximum height of a truck, stated as 3.5 m. It is thus obvious that for seasonal flights, there is no risk of collision (0).
The situation is different with species that will cross the intention several times a day when looking for feed (western marsh-harrier, white-tailed eagle, black kite, and other species not included in the previous group). Endangered are mostly the species having large feeding territories that shall pass above the intention during common search for food or preying. Collisions with vehicles passing on the bridge (crossing the entire CHVÚ Dunajské luhy) are minimized by installing bilateral noise walls with a height of 4 m, sufficient for truck passage (usual truck height is 3.5 m). The wall will be installed alongside the entire bridge and forms an integral part of the intention.
For species with feed territories exceeding outside the CHVÚ and those preying in open country, there is a risk of collisions at the continuation of the intention (from km 5.5 on). However, the frequency of flyovers will be lower there. Thus, the impacts of collisions of protected objects with

vehicles have been evaluated as slightly negative (-1).

e) Pollution of Environment

Pollution of water environment (impact on birds bound to water environment)

As long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected (-1).

Changes of absorbed emission characteristics in the territory

As it is implied by Immissions Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the limit for ecosystem protection for NOx (30 pg. m-3) on the territory of the CHVÚ, the main indicator of pollution of air by traffic, shall not occur. Thus, the CHVÚ will not be significantly negatively influenced by growth of emissions produced by the intention, even though a slight increase will occur (Chapter II.3.1). The impact was assessed as (-1).

Table 13: Summary - The overview of the significance of the impacts on the individual subjects of protection of the CHVÚ Dunajské luhy in the case of variant 1.

CHVÚ Dunajské luhy		
The subjects of protection		assessment of the impacts
Black Stork	*Ciconia nigra*	-2
Sand Martin	*Riparia riparia*	-1
Little Bittern	*Ixobrychus minutus*	-1
Mediterranean Gull	*Larus melanocephalus*	-1
Black Kite	*Milvus migrans*	-2
Common Goldeneye	*Bucephala clangula*	-1
Red-crested Pochard	*Netta rufina*	-1
Common Pochard	*Aythya ferina*	-1
Tufted Duck	*Aythya fuligula*	-1
Garganey	*Anas querquedula*	-1
Gadwall	*Anas strepera*	-1

Common Redshank	*Tringa totanus*	1
Marsh Harriers	*Circus aeruginosus*	1
Tawny Pipit	*Anthus campestris*	1
White-tailed Eagle	*Haliaeetus albicilla*	2
Smew	*Mergellus albellus*	1
Common Tern	*Sterna hirundo*	1
Common Kingfisher	*Alcedo atthis*	1
Little Egret	*Egretta garzetta*	1
migrating birds #		1

- CHVÚ is declared also for the purpose of the provision of a favourable condition of the habitats and the assurance of the conditions for survival and reproduction of migrating water birds creating groups during migration or wintering, in particular the species named in Annex 1 to the Regulation of the Ministry of Environment of the Slovak Republic of 24 October declaring the CHVÚ Dunajské luhy

IV.2.1.2. Impacts on ÚEV Biskupické luhy

The intention passes through the ÚEV t the South of PR Kopáčsky ostrov in both variants. In variant 1, in the entire length of the crossing on a system of bridges with bilateral noise walls. The area taken within the ÚEV is 3.16 ha, or 0.34 % of the total area of the ÚEV.

The subjects of protection in this ÚEV shall be affected by the following impacts of the intention:

- Seizure (direct interference with the habitats)
- Noise and light disturbance
- Increased visit rate in the location at the left-side cycling route in the inundated forests
- Collisions with vehicles
- Environment pollution (the changes in the immission characteristics, water environment pollution).

V In the period of the preparation of the construction it would be possible to suppose mainly the increased movement of people in the territories for the purpose of surveys and small activity (e.g. survey drilling, seizure survey, etc.). The main negative impact is in this case the disturbance that shall not be significant. This is the one-shot short-term impact.
V There is the assessment of the influence of the individual subjects of protection in the ÚEV Biskupické luhy by the impacts of the intention in the next part of the text:

Habitat 91F0 Inundated oak-elm-ash forests alongside lowland rivers

The impacts of the intention that shall have an impact on the habitat are the direct seizure (liquidation of the habitat) and the indirect impact on the quality of the habitat - environment pollution.

Table 14: Habitat 91F0 - Quantitative data

The overall area in Slovakia	6,835 ha
Area in the concerned ÚEV	504 ha
The area of habitats liquidated within the intention	0.8 ha
The percentage of the habitat 91F0 within the ÚEV liquidated by the intention.	0,16 %

2

In case of implementation of variant 1, some 7970 m of the 91F0 habitat will be directly destroyed

. This is approximately 0.16% of the area of the habitat within the ÚEV (504 ha). According to the mapping of habitats carried out within the Appropriate Assessment (Well Consulting, 2013) these are 22 habitats with representative levels 2 (3832 m) and 3 (4138 m), often in mosaic and with transitions to other habitats. Thus, these are not the highest quality verdures, yet their loss, especially in relation to the position in the middle of a precious large complex of alluvial forests, will be perceived.

In the case of pollution of the environment by absorbed emissions, it is based on the nature of the intention (road structure), it shall be necessary to consider in particular the increase concentration of NOx. As it is implied by Absorbed Emissions Study (Annex F.8. of the zoning and planning decision documentation), it shall not come to the exceeding of the limit for ecosystem protection for NOx (30 μg. m^{-3}) on the territory of the ÚEV.

Pollution of water environment - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.

As the intention in variant 1 will destroy a relatively small percentage of the habitat with a middle or low representative level, the impact of implementation of the intention in variant 1 on habitat 91F0 was evaluated as slightly negative (-1).

Habitat 3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type

The impacts of the intention that shall have an impact on the habitat are the direct seizure and the impact on the quality of the habitat - environment pollution.

Table 15: Habitat 3150 - Quantitative data

The overall area in Slovakia	1,400 ha
Area in the concerned ÚEV	9.16 ha
The area of habitats destroyed by the intention	0.049 ha
The percentage of the habitat 3250 within the ÚEV liquidated by the intention.	0,53 %

In case of implementation of variant 1, the bridges shall cross approximately 486 m^2 of habitat 3150 in the area of the Biskupické arm. This is approximately 0.53% of the area of the habitat within the ÚEV (9.16 ha). It can be expected that in this case, the impact will not be destroying as the river shall not be manipulated with during the construction of the bridge. However, surrounding conditions will change and these may subsequently influence the quality of the habitat (cutting of bank vegetation). Considering the high passing height of the bridge above the habitat (19 m), shading will not be very significant.

V In the case of pollution of the environment by absorbed emissions, it is based on the nature of the intention (road structure), it shall be necessary to consider in particular the increase concentration of NOx. As it is implied by Absorbed Emissions Study (Annex F.8. of the zoning and planning decision documentation), it shall not come to the exceeding of the limit for ecosystem protection for NOx (30 μg. m^{-3}) on the territory of the ÚEV. In addition, the waters in this habitat are naturally almost eutrophic. A certain increase of nitrogen concentrations, however, shall take place.

Pollution of water environment - construction - due to the work (especially digging holes for pillars) in the vicinity of the location, it is necessary to respect work discipline very strictly. The habitat could easily be polluted (drops, accidents, insufficient discipline). This is why we propose several measures to limit the risks (see Chapter V).

- Operation - as long as the procedures of disposal of waste water and the procedures applicable

to accident that are stated in the zoning permit documentation, this impact is not expected.
Considering it shall not come to the direct intervention in the habitat and just relatively small percentage of the habitat within ÚEV shall be otherwise affected, the impact of the implementation of the intention in variant 1 on habitat 3150 was assessed as moderately negative (-1).

Habitat 6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)
The impact of the intention that may act on this habitat is the influence of the quality of habitat - environment pollution.

Table 16: Habitat 6210 - Quantitative data

The overall area in Slovakia	19,809 ha
Area in the concerned ÚEV	91.63 ha
The area of habitats liquidated within the intention	0 ha
The percentage of the habitat 3250 within the ÚEV liquidated by the intention.	0 %

The direct seizure is excluded, since the habitat is located on the Kopáčsky ostrov Island at the closest, i.e. 650 m from variant 1.
V In the case of pollution of the environment by absorbed emissions (operation), it is based on the nature of the intention (road structure), it shall be necessary to consider in particular the increase concentration of NOx. As it is implied by Absorbed Emissions Study (Annex F.8. of the zoning and planning decision documentation), it shall not come to the exceeding of the limit for ecosystem protection for NOx (30 μg. m^{-3}) on the territory of the CHVÚ. Due to the distance from the intention, the increase of NOx will almost not appear in these habitats (less than 1-3 μg. m^{-3}) even though the habitat is sensitive on increased nitrogen concentrations (see Chap. II.3.1). Water environment pollution (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected (see Chapter II.3.2).
In particular with regards to a considerable distance from variant 1, the impact of the implementation of the intention in variant 1 on the habitat 3150 was assessed as zero (0).

Habitat 91H0* Thermophilic Pannonian oak forests
The habitat was not located in the territory where direct and indirect impacts reach. The impacts were assessed as zero (0).

Habitat 91G0* - Carpathians and Pannonian oak-hornbeam forests
The habitat is located 450 m from variant 1 at the closest. With regards to a sufficient distance (even after considering the load by absorbed emissions), the impact of variant 1 was assessed as zero(0)

Stag Beetle (Lucanus cervus), Great Capricorn Beetle (Cerambyx cerdo)
The impacts of the intention that could influence these species are the intervention in the habitat and the indirect impact on the quality of the habitat - environment pollution.
The intervention in the habitat of both species shall take place on the place of cutting of the inundated forest in the route of the intention. If we consider the entire area taken within the ÚEV, it is an area of approx. 3.24 hectares, or approx. 0.41 % of the habitat suitable for the occurrence of these species of beetles (total 780 ha of forest habitats). To reduce the impact on these species, it is necessary to leave the stumps and cut trees in the territory and not to remove them from the location (see Chapter V).

As it is implied by Absorbed Emissions Study (Annex F.8. of the zoning and planning decision documentation), it shall not come to the exceeding of the limit for ecosystem protection for NOx (30 μg. m-3) on the territory of the CHVÚ. A certain increase of concentrations and thus also of depositing of nitrogen will occur; this is a contribution of 2 - 3 Mg. m-3 in the vicinity of the intention.
Pollution of water environment (operation and construction). As long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected.
Light and noise disturbance (operation and construction phases) will be reduced by noise reducing and non-transparent walls on the bridges.
Collisions with vehicles (operation phase) cannot be completely excluded, but their impact will be mitigated by the substantial height of the bridge (min. 5.5 m, max. 19 m, with real height increased by another 4 m by the noise wall. It is also necessary to consider the attraction of adults by the warm surface of the road, potentially increasing the death rate.
In total, the impact of the implementation of the intention in variant 1 on the stag beetle and the great capricorn beetle was assessed as moderately negative (-1). This is due mostly to the relatively small percentage of the affected habitat, with measures proposed to reduce the impact (Chapter V).

Bullhead (Cottus gobio), Kessler's gudgeon (Gobio kessleri), Danube ruffe (Gymnocephalus baloni)
The impacts of the intention on these species are similar due to the similar habitat requirements of these three species. They are thus evaluated together. These fish prefer flowing rivers in various depths. Flowing water as a habitat has not been identified in the location of intention nor in a wider territory (Biskupické arm) within the ÚEV Biskupické luhy. The Biskupické arm itself is, apart from very short sections, characteristic by still water with very slow flowing. In addition, during the performance of the intention, the Biskupické arm will not be subject to any modifications that could influence the potential habitats of these species.
This is why the impact of implementation of the intention in variant 1 on the bullhead, Kessler's gudgeon, and Danube ruffe was evaluated as zero (0).

European Fire-bellied Toad *(Bombina bombina)*
Intervention with potential habitat (during construction) will occur especially in locations where vegetation is destroyed and/or terrain works in locations with deep still water (Biskupické arm). Due to the high clearance of the bridges over the Biskupické arm (19 m) we expect the affected areas to be re-covered and their biological functions to restore partially (return of toads to the location). However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures). Spreading of non-original species will be simplified not only by cutting and adjustments for the highway body but also by the existence of the cycling route under the bridge, as road shoulders are frequently used by invading species to expand.
The territory will remain crossable for toads relatively well even after the implementation of the intention as the entire intention in the territory of the ÚEV will be on bridges. The situation is worsened by the planned service road/cycling road under the bridge in the left-bank forests. A 6 m wide road will not only form a migration obstacle for amphibians but also an increased risk of death by collisions with vehicles and cyclists.
Light and noise disturbance (construction phase) will be more intense in the territory. During operation, naturally, the disturbing noise will grow as well. Considering the characteristics of species (sound communication), this may cause complications.
Collisions with vehicles (construction phase) are not completely avoidable but if proposed measures are adhered to (especially immediate filling of terrain bottoms during construction so that toads do not settle in there - see Chapter V), the impact is not significant for the population of toads in the ÚEV. In case of larger migrations, it is necessary to install temporary migration

barriers
(ecological supervision of the structure). In the phase of operation the risk is completely eliminated (bridges). The risk of death on the planned asphalt road under the bridges, however, remains real.
Pollution of water environment (operation) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected. During the construction, it is necessary to adhere to safe work procedures and discipline in the entire territory of Natura 2000 locations. The habitat could easily be polluted (drops, accidents, insufficient discipline). This is why we propose several measures to limit the risks (see Chapter V).
In total, the impact of the implementation of the intention in variant 1 on the European fire-bellied toad was assessed as moderately negative (-1). This is due to the relatively small taking of habitat that can partially return to original condition during the operation of the intention.

Mehelyi's Root Vole (Microtus oeconomus mehelyi)

The intervention in the potential habitat of the Mehelyi´s Root Vole (during the implementation) shall take place in particular on the places of the liquidation of vegetation, or terrain modifications, i.e. in the area of permanent seizure. The only suitable location within the ˇUEV was found on the place of the intersection of Biskupické arm. After the completion of the structure, it is assumed that the space under the bridges (even considering the sufficient clear area
- in the location of bridging the Biskupické arm 19 m) will be left as much as possible to natural development without technical adjustments (with the exception of the cycling road/service road). During the operation of the intention thus the space should be again grown, but it probably would not be fully usable for Mehelyi´s Root Vole. There is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures). The level of ground water and the regular regime of the Danube River course that is decisive for Mehelyi´s Root Vole, shall not be affected by the intention.
V In the proximity of Biskupice branch (ca km 4.59 - 4.72 of the intention), there is a real risk of killing of the individuals living there during the land stripping. Nests are constructed by the Mehelyi´s Root Voles in the bottom part of Reed clusters under the ground or on the top of the clusters (Amboz, 2011). The stripping therefore must be done outside the period of reproduction of Mehelyi´s Root Vole (in December - January at the best). The majority of the individuals of Mehelyi´s Root Vole winters outside the wet summer sites, winter occurrence in the proximity of the branch however may not be completely excluded, therefore there is still a certain risk of killing the individuals, even despite these measures.
Pollution of water environment (construction and operation) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.
Light and noise disturbance (operation phase) it shall be necessary to consider in particular the noise disturbance, or vibrations. There shall be disturbance during terrain works when inserting pillars (pit digging, possible vibrations of terrain, etc.) during the implementation.
Collisions with vehicles (construction) may not be absolutely excluded, with regards to the mobility of the species however there is no risk of a collision of the Mehelyi´s Root Vole with construction machinery really possible In the phase of operation the risk is completely eliminated (the system of bridge).
In total, the impact of the implementation of the intention in variant 1 on Mehelyi´s Root Vole was assessed as moderately negative (-1). For the mitigation of the impact they proposed the measures stated in Chapter V.

European Beaver (Castor fiber)

No beaver´s castle was found directly in the area of the construction of variant 1, however beaver occurs in the territory (signs of residence). Thus the intention intervenes with the territory of

Beaver.
The intervention in the potential habitat of the Mehelyi´s Root Vole (during the implementation) shall take place in particular on the places of the liquidation of vegetation, or terrain modifications, i.e. in the area of flyover bridge. Hoover, it shall be just temporary impact, since after the completion of the structure they would like to leave the space under the bridges (also with regards to a sufficiently large clear height on the place of bridging over Biskupice branch of 19 m) to be naturally developed from as large portion as possible, without technical treatments (save the cycling route/servicing communication). During the operation of the intention, the space should be partially regrown. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures).
Pollution of water environment (construction and operation) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.
Light and noise disturbance - during the implementation - Beaver is a night and twilight animal when the construction activities shall not probably take place. Disturbance during day is possible, yet there shall be just time-restricted activities that would not probably influence the presence of Beaver in significant way.
During the operation, in particular noise disturbance by operation on the communication shall take place. Noise from the road may cause the reduction of the use of the territory affected b noise. This regards mainly the area directly under the bridge object.
Collisions with vehicles (implementation phase) may not be absolutely excluded with regards to night and twilight activity of beaver it is not really possible. In the phase of operation the risk is eliminated (the bridges).
Disturbance by increased visit rate in the location (operation) - is connected to making the left-bank cycling route accessible for the public from the bridge. However, for beavers, dusk and night activities prevail, and at those times, the cycling route should be used only minimally.
As there is a real risk of increased disturbance, we propose protective measures in Chapter V (ban on operation of refreshment shops around the left-bank cycling route in the territory of ÚEV Biskupické luhy, system of barriers preventing vehicles from entering).
The migration possibilities of the beaver alongside the river will not be affected considering the size of the bridge (operation).
In total, the impact of the implementation of the intention in variant 1 on the European beaver was assessed as moderately negative (-1). The intervention with the territory of beavers will occur immediately under the bridges, however, it will be an intervention on a small area and only temporary. After the start of operation, it is expected that the territory will return to a condition close to natural. Migration possibilities will not be disturbed.

IV.2.1.3. Impacts on CHVÚ Sysľovské polia

None of the variants directly intervene with the CHVÚ. The seizure of the territory of the CHVÚ shall not take place. The commencement of the intention is placed to the existing Jarovce intersection, i.e. ca 20 m from the North boundary of the CHVÚ. Variant 1 and 2 are identically routed on these places. Therefore the impacts for variants 1 and 3 are identical. The subjects of protection of the HCVÚ Sysľovské polia., being Great Bustard, Bean Goose, Greater White-fronted Goose and Red-footed Falcon, shall be affected the following impacts.

- Collisions with vehicles
- Disturbance with noise, lights
- Environment pollution (changes in immissions characteristics)

The size of the above given impacts is assessed bellow, for the period of construction (implementation) and the operation (as long as the impact applies). In the period of the preparation of the structure it is possible to suppose in particular the increase movement of people in the

proximity of the CHVÚ for the purpose of surveys (geodetical, geological, etc.), however no particular activities on the territory of the CHVU shall probably take place. The impact shall thus be zero.

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a) Collisions with vehicles

Impact that shall be manifested in particular during operation. Collissions of birds with construction machinery in the construction period can be seen as improbable, its impact was evaluated as 0.

The species protected within the Sysľovské polia CHVÚ are endangered especially when migrating or flying when nesting or for feed, when they can collide with traffic while crossing the intention. For geese, these will mostly be flyovers from the Danube to their feeding habitats in the CHVÚ. The flying altitude during migration excludes a risk of injury by a passing vehicle; risk remains especially for frequent flyovers of the intention for feed. The elevated position of the Jarovce interchange above the terrain further increases the risk.

Collisions with birds are real, however, they will most probably not form a significant impact on the populations of species as the intention will basically just be an extension of the existing road from the Jarovce interchange. In the decisive segment (i.e. in the section from Jarovce

- to the SK/A state border) that is in immediate vicinity of the CHVÚ, the road is already in operation. For bustards, in addition, no collisions with automobiles are known in practice (Vlasta Škorpíková, oral information). The impact was thus assessed only as moderately negative (-1).

To minimize the risk of collision of protected objects with vehicles passing on the existing D4 highway (SR/A state border - Jarovce interchange) and the existing D2 highway (to the south from the Jarovce interchange), we recommend to add non-transparent and non-translucent unilateral noise walls from the side of CHVÚ Sysľovské polia. Besides the increase of the flight altitude of birds, noise and light disturbance inside the CHVÚ will be reduced as well. The survival of the great bustard in Slovakia is directly linked to creation of protection conditions for this territory that is an important historical reproduction location therefor.

This field needs to be reflected by a separate structure that would solve the noise situation on the existing sections of the D2 and D4 highways and on the part of the Jarovce interchange with concurrent solving of the noise load from the D2 highway for the adjacent municipality of Jarovce.

b) Disturbance with noise, lights

Noise disturbance in the construction period will be of a temporary nature only and not continuous, reducing the level of effects on the protected objects. In addition, construction works can be planned in advance according to the needs of protection of individual species. This is why noise during the construction of variant 1 can be evaluated as slightly negative (-1).

V In the operating period, however, the noise disturbance situation is different (see Chapter II.2). Strong noise will become almost continuous. According to the Noise Study (Annex F.7 to the zoning permit documentation), the distance of the 45 dB equal loudness contour at night for 2030 will be 500 m from the axis of intention (in the section passing nearby the CHVÚ). During the day, the value is 500 m for a 50 dB equal loudness contour. These noise levels seem, according to the latest knowledge, to be suitable for the determination of the limit of significant disturbing impact (an increased percentage of abandoning of the territory by individual species exists) (Reijnen et al., 1995).

If we calculate the area significantly influenced by noise growth during operation of the newly constructed D4 section, we will reach the number 14.5 ha, or 0.82% of the total area of the CHVÚ. This percentage is acceptable.

V The construction of the intention will not practically result in increased intensities in the existing sections of D2 or D4; there, intensities will grow by natural traffic growth that would be the same if the intention had not been constructed. The only difference will be whether the traffic will come on the existing D2 from Bratislava or on the newly-built D4.

The expected traffic intensities on the already existing sections of D2 and D4 that already influence the CHVÚ by noise, are, for D4 in the direction from the Jarovce interchange to the border of Austria/SK in 2030 equal to 27 500 vehicles/24 hours, and for D2 from the Jarovce interchange to the Hungary/SK border in 2030 equal to 18 500 vehicles/24 hours.
While most birds are capable of certain adaptation, it is more than probable that this area, significantly affected by noise (from the existing D2 and D4 and by a small contribution from the newly built D4), will lose the value of a nesting habitat for some of the bird species. However, they can still partially use it as a feeding territory. The main factor influencing the prosperity of bustards in traditional locations, however, is a change of the structure of grown crops and intensification of agricultural production (Škorpíková, 2008). The impact was assessed as moderately negative (-1).

To minimize noise and light disturbance of the protected objects by vehicles passing on the intention, we recommend, as a mitigating measure, installing non-transparent and non-translucent unilateral noise walls in the area of the Jarovce interchange and of the feeders (especially from the state border), located closest to the borders of CHVÚ Sysľovské polia. The survival of the great bustard in Slovakia is directly linked to creation of protection conditions for this territory that is an important historical reproduction location therefor.
This needs to be reflected when solving the noise situation in the existing sections of D2 and D4 and the Jarovce interchange when solving the noise load on the municipality of Jarovce.

c) Pollution of Environment

Changes of absorbed emission characteristics in the territory
As implied by the Absorbed Emissions Study (Annex F.8 to the zoning permit documentation), during operation, the limit of NOx (30 pg. m-3) for the protection of the ecosystem in the territory of CHVÚ will not be exceeded. In addition, economic crops that are not too sensitive on nitrogen load prevail on the territory of the CHVÚ. A certain increase of the concentration and thus an increase of nitrogen deposits will surely occur. The impact was assessed as moderately negative (-1).

Pollution of Water Environment

As long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected. The impact was assessed as (0).

Table 18: Summary - The overview of the significance of the impacts on the individual subjects of protection of the CHVÚ Dunajské luhy in the case of variant 1.

CHVÚ Sysľovské polia		
The subjects of protection		Impact assessment
Great Bustard	*Otis tarda*	-1
Greater White-fronted Goose	*Anser anbifrons*	-1
Taiga Bean Goose	*Anser fabalis*	-1
Falcon red-footed	*Falco vespertinus*	-1

IV.2.1.4. Impacts on ÚEV Ostrovné lúčky

AS the species potentially affected by the intention, the following species were assessed in the previous chapter: Red Flat Bark Beetle, Stag Beetle, Greater Mouse-eared Bat and Great Capricorn Beetle. With regards

rather great distance of variant 1 from the ÚEV (ca 800 m),, the possible impacts of the intention on the subjects of protection were reduced to:

- Collisions with vehicles
- Disturbance with noise and lights
- Environment pollution (water environment pollution)

The environment pollution with immissions was excluded on the basis of the Immissions Study (annex F.8 of the zoning and planning decision documentation). On the territory of the ÚEV, the limit for the protection of ecosystem for NOx (30 μg. m^{-3}.$year^{-1}$) shall not be exceeded. The increase in concentration and thus the increase in nitrogen deposits as the contribution of the operation of the intention shall be inconsiderable (less than 1 μg. m^{-3}). The reason is in particular the large distance of the location from intention. The impact was assessed as zero (0).
V The following part of the text stated the assessment of the influence of the subjects of protection of the ÚEV Ostrovné lúčky by the impacts of the intention, always for the period of construction and operation. During the period of the preparation of the intention, the impact on the subjects of protection shall be zero (0).

Red Flat Bark Beetle,(Cucujus cinnaberinus), Stag Beetle (Lucanus cervus) and Great Capricorn Beetle(Cerambyx cerdo)

The impacts of the intention that could influence these species is in fact just the indirect impact on the quality of the habitat - environment pollution. The their impacts were excluded with regards to the distance from the intention and the ecological demands of the three species. The contacts of the individuals from the ÚEV with vehicles on the intention were excluded as improbable with regards to a notable distance of the location from the intention (800 m), the height of flyover bridge (min. 5.5. above the course of the Danube, max. 26.5 m), the real height of which shall be increased by another č m anti-noise wall and the notable distance from the intention. According to the telemetric study (Rink a Sinsch, 2007), the colonisation of the new places (by Stag Beetles) varies up to the distance less than 1 km per generation, it would be probably in fact.
Water environment pollution (operation and construction) - that could affect the habitats where the beetles live - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected.
Overall, the impact of the implementation of the intention in variant 1 would be for Red Fat Bark Beetle, Stag Beetle a Great Capricorn Beetle assessed aszero(0).

Greater Mouse-eared Bat (Myotis myotis)

Contacts with vehicles (during the operation) may not be altogether excluded, in particular with regards to the mobility of the species. Greater Mouse-eared Bat makes the regular flights to the hunting regions to the distance of 5 - 7 m. However, Greater Mouse-eared Bat usually flies low at the terrain, thus the risk of a collision on high bridges is minimised. It can fly through an underpass with the height of 2 m ((Tomáš Bartonička (ČESON), oral presentation). The real risk of a collisions then takes place in forest stands and at their edges used by bats as hunting regions where they may fly higher. However, the risk is substantially reduced by the implementation of protective walls on the flyover bridge.
Greater Mouse-eared Bat prefers forest environment, the risk of a contact in the section of the intention passing through an open countryside (outside the flyover bridge) is thus significantly reduced-
Water environment pollution (both operation and construction), that could affect the habitats inhabited by the species. As long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected.
Disturbance with noise and lights (both operation and construction), shall be manifested only

when the Bats would fly from the ÚEV to the proximity of the intention, that could be used as a hunting region, yet the impact would not be significant with regards to the surrounding vast stands that would be possibly used as replacement areas. Disturbance from bridges shall be minimised too by the installation of anti-noise and anti-glare walls. Wintering place and summer colonies that are located in the case of this species under ground or in the lofts of large buildings probably shall not be affected by noise.
In total, the impact of the implementation of the intention in variant 1 on Greater Mouse-eared Bat was assessed as moderately negative (-1). The intention would not affect summer colonies and wintering places, the risk of contacts is significantly minimised by anti-noise walls on the entire flyover bridge.

IV.2.1.5. Impacts on CHVÚ Lesser Carpathians

None of the variants directly intervene with the CHVÚ. Variant 1 and 2 are identically routed on these places. Therefore the impacts for variants 1 and 3 are identical. The subjects of protection in the CHVÚ Lesser Carpathians shall be (with regards to rather large distance from the intention - 4.5 km being the shortest distance on the place of the completion of GSI Ivanka North) affected by just one impact.

- Collisions with vehicles

The following species were assessed in Chapter III.2.5 as the species potentially influenced by the intention: Saker Falcon, European Honey-buzzard, Eurasian Eagle-Owl, Peregrine Falcon and Eastern Imperial Eagle.
During the period of the preparation of the intention, the impact on the subjects of protection shall be zero (0).

The collision of birds with construction machinery in the period of construction may be labelled as less probable. Impact shall be manifested in particular during the operation.
The above given species may pass through the intention even several times a day when obtaining food (Saker Falcon, European Honey-buzzard, Eurasian Eagle-Owl, Peregrine Falcon and Eastern Imperial Eagle). These are the species having large feeding territories and they shall pass above the intention during a common search for feed or when hunting. However, it is necessary to state that already today, the wider territory of the structure is relatively seriously burdened by traffic; this is therefore not a phenomenon that would be completely new for the said bird species. The risk of knocking down is higher in particular in the case of young individuals, globally this is not too probable either. The impact on these species was assessed as moderately negative (-1).

Table 19: Summary - the overview of the significance of the impacts on the individual subjects of protection in the CHVU Lesser Carpathians.

CHVÚ Lesser Carpathians		
The subjects of protection		Impact assessment
Saker Falcon	*Falco cherug*	-1
European Honey-buzzard	*Pernis apivorus*	-1
Middle Spotted Woodpecker	*Dendrocopos medius*	0
White-backed Woodpecker	*Dendrocopos leucotos*	0
Syrian Woodpecker	*Dendrocopos syriacus*	0
Black Woodpecker	*Dryocopus martius*	0
Eurasian Eagle-owl	*Bubo bubo*	-1
Black Stork	*Ciconia nigra*	0
European Nightjar	*Caprimulgus europaeus*	0
Peregrine Falcon	*Falco peregrinus*	-1
Collared Flycatcher	*Ficedula albicollis*	0
Red-breasted Flycatcher	*Ficedula parva*	0
Red-backed Shrike	*Lanius collurio*	0
Grey-headed Woodpecker	*Picus canus*	0
Barred Warbler	*Sylvia nisoria*	0
Common Quail	*Coturnix coturnix*	0
Eurasian Wryneck	*Jynx torquilla*	0
Spotted Flycatcher	*Muscicapa striata*	0
Common Redstart	*Phoenicurus phoenicurus*	0
Common Stonechat	*Caxicola torquata*	0
European Turtle Dove	*Streptopelia turtur*	0
Eastern Imperial Eagle	*Aquila heliaca*	-1

IV.2.1.6. Impacts on ÚEV Bratislavské luhy

Variant 1 passes by the location to the South at the distance of approximately 2 km down the river stream. For this reason (a sufficient distance) and thanks to the character of the intention (bridge), the impacts such as seizure, environment pollution, noise, migration restriction, etc. were excluded. The only possible impact that remains possible are possible contracts of animals with traffic on the intention (bats). However, this impact is eliminated by sufficiently high anti-noise walls (4M) alongside the entire intention above the Danube River and the adjacent inundated forests. Therefore in the case of variant 1, the impact on the subjects of protection in the ÚEV Bratislavské luhy was assessed as zero (0).

IV.2.2. Variant 2 (green) IV.2.2.1. Impacts on CHVÚ Dunajské luhy

The subjects of protection in the CHVÚ Dunajské luhy shall be affected in particular by the following impacts:

- Seizure (direct interference with the habitats)
- Noise and light disturbance
- Increased visit rate in the location
- Collisions with vehicles
- Environment pollution (the changes in the immission characteristics, water environment pollution).

The size of the above given impacts is assessed bellow, for the period of construction (implementation) and the operation (as long as the impact applies). In the period of the preparation of the construction it would be possible to suppose mainly the increased movement of people in the territories for the purpose of surveys and small activity (e.g. survey drilling, seizure survey, etc.). The main negative impact is in this case the disturbance that shall not be significantly negative. This is the one-shot short-term impact.

a) Seizure (direct interference with habitats)

The impact that shall commence in the period of construction and shall persist till the operation period.

This variant passes through the CHVÚ in its North part, in particular the upper part of Hrušovská zdrž Dam, where the entire inundation part is not permanently flooded. It passes approximately through the south end of rowing channel, ca 670 m more to the South than variant 1. The area permanently taken by the red variant is 12.77 ha, or 0.08 % of the total area of the CHVÚ. In total, there are the habitats suitable for occurrence or nesting of any of the subject of protection in the entire area.

The intention runs through the majority of the space of SHVÚ on bridges, the exception is last ca 180 m of the passage through CHVÚ, overcame by the intention on the terrain. The anti-noise and anti-glare walls on the place of the passage through Natura 2000 system (ca km 3.000 - 5.700) are designed alongside the entire length of the passage through CHVÚ (to the right km 2.900 - 7.500; to the left km 2.900 - 5.800) . The height is just 2m.

Forest habitats in the permanent seizure shall be liquidated and trees cut, however the surface shall not be reinforced and treated in any other way (save the places where pillars shall be erected). With regards to rather large clear height (min. 4 m) we may suppose the gradual re-growth in the part of the area with vegetation. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures).

Water areas under the flyover bridge shall be affected only on the place of the construction of the pillars in water course. The other parts of the water course under the flyover bridge shall be untouched by the construction.

For the species that do not have feeding and nesting habitats in the territory affected by the construction, the impact of seizure was assessed as zero,, in both implementation and operation period. The following species are concerned: Common Redshank, Tawny Pipit, Sand Martin and Mediterranean Gull.

The majority of the subjects of protection uses the territory as feeding territories or gathering places (migrating and wintering species). The loss of habitats is in this case with regards to the minimum area (0.067%) within the CHVÚ significant and the impact was assessed as moderately negative (-1), in both implementation and operation periods. The following bird species are concerned: Western Marsh-Harrier, Common Tern, Little Egret, Common Pochard, Tufted Duck, Common Goldeneye, Smew, migrating species of water birds creating groups during migration or wintering, in particular the birds named in Annex 1.

In the surroundings of variant 2, nesting habitats of the following species are located: Common kngfisher -according to an ornithological survey (Kúdela, Melišková, Littera, 2011), 4 nesting

pairs were found in a wider territory of the intention in 2011, however, no pairs were found directly in the route of the intention where a nesting location could be destroyed. For this species, liquidation of habitats in the area of the intention was thus evaluated as slightly negative (-1) both during implementation and during operation.

Little bittern - while the ornithological survey (Kúdela, Melišková, Littera, 2011) did not find it in the territory, both banks have habitats potentially suitable for the nesting of this species. While the most suitable reed habitats were destroyed during the construction of houseboats and waterside adjustments, future nesting of the bittern cannot be excluded. For this species, liquidation of habitats in the area of the intention was thus evaluated as slightly negative (-1) both during implementation and during operation.

Gadwall, garganey, red-crested pochard - in the taken area, habitats that can potentially be used by the species as nesting locations exist (the Biskupické arm). This is why liquidation of habitats has been evaluated as slightly negative (-1) for these species.

Black stork - according to the ornithological survey (Kúdela, Melišková, Littera, 2011), in the vicinity of variant 2, probably 1 pair of black stork regularly nested until 1995; at present, the nesting population is on its minimum (1 nesting pair in the CHVÚ), however the population seems to have grown recently. In such a case it would probably came to the re-settlement of the area. For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.

Black kite - in the past, a part of the CHVÚ around the intention was a regular nesting location of this species. Currently, it nests only irregularly, however it occurs every year. Since the reduction in the species occurred on the entire territory of the Slovak Republic, this territory remains further

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the significant location of the species from the national point of view and it can be supposed that when the Danube population starts growing again, it would occupy the former territories within the territory affected by the construction (Kúdela, Melišková, Littera, 2011). For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.

White-tailed Eagle - the contemporary nesting population of the species in the CHVÚ is 4 pairs (2006 - 2011). It is the greatest nesting place of the species in Slovakia. One pair nests in the territory directly affected by the construction of the intention, which is 1/4 of the overall population in the CHVÚ. For this species, liquidation of habitats in the area of the intention was thus evaluated (despite the relatively small percentage taken from the CHVÚ) as significantly negative (-2) both during implementation and during operation.

- Noise and light disturbance

Impacts that will be present in different levels during construction and during operation.

As the objects of protection include no bird species that would be active mostly at night and as light disturbance will be shaded by noise walls, light disturbance can be considered, both during the construction and during the operation, to have a moderately negative impact (-1).

Noise disturbance in the construction period will be of a temporary nature only and not continuous, reducing the level of effects on the protected objects. In addition, construction works can be planned in advance according to the needs of protection of individual species. This is why noise during the construction of variant 2 can be evaluated as slightly negative (-1).

V In the operating period, however, the noise disturbance situation is different (see Chapter II.2). Strong noise will become almost continuous. Noise disturbance will be partially eliminated by the installation of noise walls that will be installed in the entire length of the crossing of CHVÚ, however, with insufficient height (only 2 m), substantially reducing their effects.

A significantly disturbing sound level at which birds leave their territories is the level of 45 - 50

dB (Reijnen, 1995). However, this is an approximate value somewhere in the middle of a range as the noise sensitivity of each bird species is different. According to the Evaluation Report (Geoconsult, 2010), the area affected by more than 50 dB of noise within the CHVÚ is some 412.95 ha, or 2.5% of the total area of the CHVÚ.
The percentage applies to the species using all of the affected habitats (e.g. nesting places, feeding habitats), thus the forest habitats in Biskupické luhy and water areas and inundation of the Danube River. These species are Black kite, White-tailed eagle.
In the case of species using mainly the forest stands of Biskupické luhy, the significant extent of disturbance shall affect ca 192.75 ha, i.e. approximately 2.33 % of the type of environment within the CHVÚ. This regards mainly Black Stork.
The rest of the species uses, to a smaller or greater extent, the floodplain territory of the Danube, the flow of the Danube and the adjacent wetlands, as well as fields and meadows in the CHVÚ (western marsh-harrier, little egret, Mediterranean gull, sand martin, common tern, ducks, migratory species of water birds). Noise will significantly impact 220.2 ha of the area, or 2.30 % of the type of environment within the CHVÚ. The CORINE Land Cover 2006 - 2012 (Slovak Environmental Agency) was used to calculate the areas of individual types of coverage of the country.
Considering the fact that it is a relatively large percentage of the area, situated, even worse, inside the CHVÚ, it is necessary to evaluate the noise disturbance by variant 2 (green) as significantly negative (-2) for the species of Black kite, White-tailed eagle, and Black stork.
These species are relatively timid and require vast non-disturbed areas for life. For other species, the impact has been evaluated as slightly negative (-1).

- Increased visit rate in the location

The left bank of the Danube is currently hard to access and thus is not visited frequently. However, the intention counts on making the left-bank cycling route accessible for the public. A lane for pedestrians and cyclists will separate from the bridge. Thus, justified fears exist that the visit rate of the left bank will increase significantly, bringing disturbance not only in the bank area but also in alluvial forests that were previously visited very little and that provide refuge to species that are disturbance-sensitive (black stork, white-tailed eagle, black kite). There is a risk that increased visit rate will force these sensitive species out of their currently inhabited habitats. The impact of increased visit rate to the location as an indirect consequence of implementation of the intention has been evaluated as slightly negative (-1).
To reduce negative impacts, we propose the measure specified in Chapter V. This involves the construction of a system of barriers preventing from non-permitted driving into the territory of the CHVÚ Dunajské luhy on both sides of the Danube. We also propose to ban any refreshment shops alongside the entire left-bank cycling route in the territory of CHVÚ Dunajské luhy.

- Collisions with vehicles

Collissions of birds with construction machinery in the construction period can be seen as improbable, its impact was evaluated as 0.
Impact shall be manifested in particular during the operation.
The protected objects can be divided into several categories depending on the frequency of passage over the territory of the intention. Species living in a relatively small territory and bound to a specific habitat (e.g. little bittern, common redshank, tawny pipit, common kingfisher) will fly over the body of the expressway especially in the migration period (if they migrate). In these flyovers, the risk of collision with passing vehicles is low. The risk of collisions only exists during reduction of fight altitude, e.g. in order to rest. The altitudes identified by radar during migration vary between 200 and 7000 m for various species. For example, songbirds fly at 1000 - 2000 m at night and at 200 - 300 m during the day (Veselovský, 2001). The risk of collision with passing vehicles is defined by the maximum height of a truck, stated as 3.5 m. It is thus obvious that for seasons flights, the risk of collision is insignificant (0).
The situation differs for species that will fly over the intention several times a day when looking

for feed. Endangered are mostly the species having large feeding territories that shall pass above the intention during common search for food or preying. Collisions with passing vehicles on bridges in the location of crossing of the CHVÚ are partially mitigated by the installation of a bilateral noise wall that is 2 m tall. However, this height is insufficient to avoid collisions of bird species with trucks (the height of a truck is usually 3.5 m). A sufficient height of noise wall for the protected objects preferring forests is of key importance (black stork, white-tailed eagle, black kite) and the existence of insufficiently protected frequented road hidden inside a forest is a huge risk for these species. Thus, the impact of collisions with vehicles for these species in variant 2 has been evaluated as significantly negative (-2). The impact could be reduced by installation of noise walls with sufficient height alongside the entire length of crossing the CHVÚ (see Chapter V) if the walls were an integral part of the project.

Other species protected in the CHVÚ prefer water environment (sand martin, common goldeneye, red-chested pochard, common pochard, tufted duck, gadwall, garganey, western marsh-harrier, smew, common tern, little egret, migratory water birds), wetlands and open land - marsh harrier. Thus, the impacts of collisions of protected objects with vehicles have been evaluated as slightly negative (-1). The noise wall in the section crossing the CHVÚ must be increased to a minimum height of 4 m (see Chapter V).

- Pollution of Environment

Pollution of water environment (impact on birds bound to water environment)

If the procedures of disposal of waste water and procedures for accidents (oil traps, retention tanks, seepages and release to recipient) specified in the Feasibility Study are verified, this impact will not be significant (-1).

changes of absorbed emission characteristics in the territory

As is implied by the Emission Study (Pirman, 2010), in the territory of the CHVÚ exceeding of limit for the protection of ecosystem for NOx (30 pg. m^3), the main indicator of air pollution for ecosystems from traffic, shall not occur. A certain increase however shall take place. *The impact was assessed as (-1).*

Table 20: Summary - The overview of the significance of the impacts on the individual subjects of protection of the CHVÚ Dunajské luhy in the case of variant 2.

CHVÚ Dunajské luhy		
The subjects of protection		assessment of the impacts
Black Stork	*Ciconia nigra*	-2
Sand Martin	*Riparia riparia*	-1
Little Bittern	*Ixobrychus minutus*	-1
Mediterranean Gull	*Larus melanocephalus*	-1
Black Kite	*Milvus migrans*	-2
Common Goldeneye	*Bucephala clangula*	-1
Red-crested Pochard	*Netta rufina*	-1
Common Pochard	*Aythya ferina*	-1
Tufted Duck	*Aythya fuligula*	-1
Garganey	*Anas querquedula*	-1
Gadwall	*Anas strepera*	-1
Common Redshank	*Tringa totanus*	-1
Marsh Harriers	*Circus aeruginosus*	-1
Tawny Pipit	*Anthus campestris*	-1
White-tailed Eagle	*Haliaeetus albicilla*	-2
Smew	*Mergellus albellus*	-1
Common Tern	*Sterna hirundo*	-1
Common Kingfisher	*Alcedo atthis*	-1
Little Egret	*Egretta garzetta*	-1
migrating birds #		-1

CHVÚ is declared also for the purpose of the provision of a favourable condition of the habitats and the assurance of the conditions for survival and reproduction of migrating water birds creating groups during migration or wintering, in particular the species named in Annex 1 to the Regulation of the Ministry of Environment of the Slovak Republic of 24 October declaring the CHVÚ Dunajské luhy

IV.2.2.2. Impacts on ÚEV Biskupické luhy

The intention passes through the ÚEV t the South of PR Kopáčsky ostrov in both variants. In variant ľ, it is lead (save the last 80 m) in the entire length of the passage through the ÚEV on a bridge.

The anti-noise and anti-glare walls on the place of passage through Natura 2000 system (ca m 3.0 - 5.7) are designed alongside the entire length. Bilateral walls are designed in the entire length of crossing of the ÚEV (in km 2.900 - 7.500 on the right; in km 2.900 - 5.800 on the left). However, their height is only 2 m. The area taken within the ÚEV is 3.96 ha, or 0.46% of the total area of the ÚEV.

The subjects of protection in this ÚEV shall be affected by the following impacts of the intention:

- Seizure (direct interference with the habitats)
- Noise and light disturbance
- Increased visit rate in the location
- Collisions with vehicles

- Environment pollution (the changes in the immission characteristics, water environment pollution).

V In the period of the preparation of the construction it would be possible to suppose mainly the increased movement of people in the territories for the purpose of surveys and small activity (e.g. survey drilling, seizure survey, etc.). The main negative impact is in this case the disturbance that shall not be significant. This is the one-shot short-term impact.

V There is the assessment of the influence of the subjects of protection in the ÚEV Biskupické luhy by the impacts of the intention in the next part of the text:

Habitat 91F0 Inundated oak-elm-ash forests alongside lowland rivers

The impacts of the intention that shall have an impact on the habitat are the direct seizure (liquidation of the habitat) and the indirect impact on the quality of the habitat - environment pollution.

Table 21: Habitat 91F0 - Quantitative data

The overall area in Slovakia	6,835 ha
Area in the concerned ÚEV	504 ha
The area of habitats liquidated within the intention	1.836 ha
The percentage of the habitat 91F0 within the ÚEV liquidated by the intention.	0,36 %

2

In case of implementation of variant 2, some 18,361 m of the 91F0 habitat will be directly destroyed. This is approximately 0.36 % of the area of the habitat within the ÚEV (504 ha). According to the mapping of the habitats carried out within the Appropriate Assessment (Well Consulting, 2013) this regards the stands with the representativeness of 2 (6,000 m) or 3 (12,361 m), often in a mosaic and with transitions to other habitats. These are not thus the stands of the supreme quality, despite that their loss, in particular with regards to the position in the middle a valued vast complex of inundated forest shall be notable.

As it is implied by Dispersion Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the absorbed emission limit the for ecosystem protection for NOx (30 μg. m-3.year-1) will not occur in the territory of the ÚEV; these are the pollutants that are the main indicator of air pollution for ecosystems from transport. However, there shall be a certain increase (the contribution of 2 - 3 g. m-3.year-1)

Pollution of water environment - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the Feasibility Study, this impact is not expected.

As the intention in variant 2 will destroy a relatively small percentage of the habitat with a middle or low representative level, the impact of implementation of the intention in variant 2 on habitat 91F0 was evaluated as slightly negative (-1).

Habitat 91F0 - Carpathians and Pannonian oak-hornbeam forests

The impacts of the intention that shall have an impact on the habitat are the direct seizure (liquidation of the habitat) and the indirect impact on the quality of the habitat - environment pollution.

It is necessary to state that in the case of habitat 91G0*, the presence of the habitat in the territory is significantly questionable as according to the mapping done within the preparing of the Appropriate Assessment (Mapping of habitats of Dunajské luhy in variants of routes of the D4 highway. Well Consulting, 2013), really nice and representative verdures of this type are absent

here. These are always the stands with a strong transition to the stands of habitat 91F0 and their classification is therefore disputed Also the information from ŠOP SR (Mgr.Radovan Michalka) correspond with it, according to him, this subject of protection was included in the ÚEV Biskupické luhy by an erroneous translation of forest typology to the habitats of the European importance. However, the stands comprise some xerophilic elements typical for habitat91 G0* due to which they approached to the inclusion of the stands to this habitat. Habitat 91 G0* belongs to the territory also from geographic point of which and thanks to other parameters.

Table 22: Habitat 91G0 - Quantitative data

The overall area in Slovakia	12,550 ha
Area in the concerned ÚEV	28.5 ha
The area of habitats liquidated within the intention	0.923 ha
The percentage of the habitat 91G0 within the ÚEV liquidated by the intention.	3,2 %

V In the case of construction of variant 2, the bridges will cross some 9 233 m^2 of the 91G0* habitat (3.2% of the total area of the habitat within the ÚEV). While these habitats are not typical, their loss, in particular with regard to the position in the middle of a valued vast complex of inundated forest, shall be notable. In addition, there is also the potential for further development of stands towards this habitat. As it is implied by the immissions study (Annex F.8 to the zoning and planning decision documentation), on the territory of the ÚEV it shall not come to the exceeding of absorbed emission limit for the protection of ecosystem for NOx (30 pg. m^{-3}), the main indicator of air pollution for ecosystems from traffic, shall not occur (see Chapter II.3.1). A certain increase however shall take place.

Pollution of water environment - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the Feasibility Study, this impact is not expected.

In total, the impact of the implementation of the intention in variant 2 on habitat 91G0* was assessed as significantly negative (-2). The reason is a large percentage of the seizure of the habitat that is little representative but it transits to the stands of habitat 91F0, however it has a potential for the development towards habitat with better quality.

Habitat 6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)

The impact of the intention that may act on this habitat is the indirect influence of the quality of habitat - environment pollution.

Table 23: Habitat 6210 - Quantitative data

The overall area in Slovakia	19,809 ha
Area in the concerned ÚEV	91.63 ha
The area of habitats liquidated within the intention	0 ha
The percentage of the habitat 3250 within the ÚEV liquidated by the intention.	0 %

Direct taking is excluded as the habitat is located on the Kopáčsky ostrov island at the closest, i.e. more than 1 km from variant 2.

As it is implied by Dispersion Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the limit for ecosystem protection for NOx (30 pg. m-3) on the territory of the ÚEV, the main indicator of pollution of air by traffic, shall not occur (see Chapter

II.3.1.). There will be a certain increase, however, due to the distance from the intention, it will be negligible (less than 1 pg. m-3).
Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.

In total, the impact of the implementation of the intention in variant 2 on habitat 6210 was evaluated as zero.

m.

Habitat 3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type
The impact of the intention that may act on this habitat is the indirect influence of the quality of habitat - environment pollution.

Table 24: Habitat 3150 - Quantitative data

The overall area in Slovakia	1,400 ha
Area in the concerned ÚEV	9.16 ha
The area of habitats liquidated within the intention	0 ha
The percentage of the habitat 3250 within the ÚEV liquidated by the intention.	0 %

Direct taking is excluded as the habitat is located in the Biskupické arm at the closest, i.e. more than 630 m from variant 2.
As it is implied by Dispersion Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the limit for ecosystem protection for NOx (30 pg. m-3) on the territory of the ÚEV, the main indicator of pollution of air by traffic, shall not occur (see Chapter II.3.1.). There will be a certain increase, however, due to the distance from the intention, it will be

-3

negligible (less than 1 pg. m). In addition, this habitat is naturally eutrophic or even mesotrophic.

Appropriate assessment of impact of intention on territories of European importance and protected avian territories

Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.

In total, the impact of the implementation of the intention in variant 2 on habitat 3150 was evaluated as zero.

Habitat 91H0* Thermophilic Pannonian oak forests

The habitat was not located in the territory where direct and indirect impacts reach. The impacts were assessed as zero (0).

Stag Beetle (Lucanus cervus), Great Capricorn Beetle (Cerambyx cerdo)

With regard to similar ecological requirements, these two species of saproxylophages were assessed together. The impacts of the intention that may influence these species are intervention with the habitat, influencing of habitat quality - pollution of environment, light and noise disturbance, and collisions with vehicles.

The intervention in the habitat of both species shall take place on the place of cutting of the inundated forest in the route of the intention. If we consider the entire area taken within the ÚEV, it is an area of approx. 3.96 hectares, or approx. 0.5% of the habitat suitable for the occurrence of these species of beetles (total 780 ha of forest habitats). Thus, the intervention with the habitat will not be significant. In addition, the impact on the populations of both species can be mitigated. It is

necessary, for example, to leave the stumps and cut trees in the territory and not to remove them from the location (see Chapter V).

As it is implied by Dispersion Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the absorbed emissions limit for ecosystem protection for NOx (30 pg. m-3) on the territory of the ÚEV, the main indicator of pollution of air by traffic, shall not occur; these may cause reduced quality of forests.

Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.

Also, collisions with vehicles (operation phase) cannot be excluded; these may be supported by the fact that insects are attracted by lights of automobiles (considering the evening and night activity of adults). Adults sitting on the warm surface of the road are also probable.

In total, the impact of the implementation of the intention in variant 2 on the stag beetle and the great capricorn beetle was assessed as moderately negative (-1). The reasons are especially in the acceptable percentage of the affected habitats of these species. To reduce the impact, measures were proposed (Chapter V).

Bullhead (Cottus gobio), Kessler's gudgeon (Gobio kessleri), Danube ruffe (Gymnocephalus baloni)

The impacts of the intention on these species are similar due to the similar habitat requirements of these three species. They are thus evaluated together.

These fish prefer flowing rivers with various depths. In the location of the intention and in wider surroundings (where influence by indirect impacts by the intention could occur), no such habitats have been identified in the ÚEV Biskupické luhy. In the Biskupické arm, still water prevails, and the maximum flow speed is around several cm/s. This fact was also confirmed by consulting with Ing. Peter Beleš (slovak Fishing Union).

This is why the impact of implementation of the intention in variant 2 on the bullhead, Kessler's gudgeon, and Danube ruffe was evaluated as zero (0).

European Fire-bellied Toad (Bombina bombina)

Intervention with potential habitat (during construction) will occur especially in locations where vegetation is destroyed and/or terrain works in locations with deep still water; however, such locations are not frequent in the route of variant 2. As the fire-bellied toad prefers water surfaces with soft-leaved vegetation in sun-covered locations for reproduction and life (Baruš et al., 1992), the removal of the vegetation will probably cause a temporary moving of toads outside the affected area. After recovery (while probably only partial) (during the operation of the intention) of the water surfaces, toads can be expected to return to the location. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures).

During construction, it is necessary to fill any holes created during construction immediately so that toads do not populate them - see Chapter V.

Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.

Light and noise disturbance (construction phase) was excluded due to the characteristics of the species. During operation, naturally, the disturbing noise will grow. Considering the characteristics of species (sound communication), this may cause complications.

Collisions with vehicles (construction phase) are not completely avoidable but if proposed measures are adhered to (especially immediate filling of terrain bottoms during construction so that toads do not settle in there - see Chapter V), the impact is not significant for the population of toads in the ÚEV. In the operation phase, the risk is eliminated in the majority of the territory

(bridge).
In total, the impact of the implementation of the intention in variant 2 on the European fire-bellied toad was assessed as moderately negative (-1). During construction, it is necessary to adhere to the proposed measures (Chapter V).

Mehelyi's Root Vole (Microtus oeconomus mehelyi)

Influence into the potential habitat of the root vole (during construction) - The intention in variant 2 does not cross a habitat suitable for reproduction of root voles (they prefer areas with a high level of subsurface water with reed, sedge, and stem vegetation). Theoretically, wintering locations could be influenced; however, this is not too probable due to the relatively high distance of reproduction sites.
The intervention with the potential wintering locations shall take place in particular on the places of the liquidation of vegetation, or terrain modifications, i.e. in the area of permanent seizure. After the completion of the structure it is foreseen that the space under the bridges (also with regards to a sufficiently large clear height on the place of bridging - at least 4 m) will be left for natural development as much as possible, without technical treatments (apart from the cycling route/service road). During the operation of the intention thus the space should be again grown, but it probably would not be fully usable for Mehelyi´s root vole. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures).
The level of ground water and the regular regime of the Danube River course that is decisive for Mehelyi´s Root Vole, shall not be affected by the intention.
Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.
Light and noise disturbance (construction phase) was excluded due to the characteristics of the species. During the construction, disturbance must be foreseen in ground works when building pillars (pit digging, possible vibrations of terrain, etc.).
Collisions with vehicles (construction) may not be absolutely excluded, with regards to the mobility of the species however there is no risk of a collision of the Mehelyi´s Root Vole with construction machinery really possible In the phase of operation, this risk is completely eliminated in the majority of the route through the ÚEV (bridge), apart from a small part of the ÚEV (approx. 80 m).
In total, the impact of the implementation of the intention in variant 2 on Mehelyi´s Root Vole was assessed as moderately negative (-1). Habitats where voles spend winters could be influences, but this probability is low.

European Beaver (Castor fiber)

No beaver´s castle was found directly in the area of the construction of variant 2, however beaver occurs in the territory (signs of residence). A territory of a beaver family will thus be influenced.
Impact on beaver habitats (during construction) will occur mostly in locations where verdures will be removed and terrain adjusted, i.e. in the bridge area. This will, however, be just a temporary influence of the impact, as it is foreseen that after completion of the structure, the space under the bridge (also thanks to the sufficient clear height - min. 4 m) will be left for natural development without technical modifications. During the operation of the intention, the space should thus be partially regrown. However, there is also the real risk of the invasion of non-original plant species that should be eliminated (see Chapter V., Proposal of the Measures).
Light and noise disturbance - during construction - the beaver is a night and dusk animal; construction activities will probably not take place then. Disturbance during day is possible, yet there shall be just time-restricted activities that would not probably influence the presence of beaver in significant way.
Strong noise will become almost continuous during operation. However, noise disturbance will be

partially eliminated by the installation of noise walls that will only be installed up to 2 m of height, substantially reducing their effect. They do not eliminate the noise directly under the bridge (driving over expansion joints, vibrations, etc.).
The influence could be mitigated by installing noise reducing walls of a sufficient height (min. 4 m) along the entire length of crossing the ÚEV (see Chapter V).
Collisions with vehicles (implementation phase) may not be absolutely excluded, however, considering the mobility and intelligence of the species the risk of collision of the beaver with construction machinery is not too realistic. In the operation phase, this risk is completely eliminated on most of the route in ÚEV (bridge). The parameters of the bridges also exclude any restriction of migration of beavers alongside the Danube.
Pollution of water environment (operation and construction) - as long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning permit documentation, this impact is not expected.
Disturbance by increased visit rate in the location (operation) - is connected to making the left-bank cycling route accessible for the public from the bridge. However, for beavers, dusk and night activities prevail, and at those times, the cycling route should be used only minimally.
As there is a real risk of increased disturbance, we propose protective measures in Chapter V (ban on operation of refreshment shops around the left-bank cycling route in the territory of ÚEV Biskupické luhy, system of barriers preventing vehicles from entering).
In total, the impact of the implementation of the intention in variant 2 on the European beaver was assessed as moderately negative (-1). The reason is a relatively small impact on the territory of beavers that does not form a migration barrier.

IV.2.2.3. Impacts on CHVÚ Sysľovské polia

None of the variants directly intervene with the CHVÚ. The commencement of the intention is placed to the existing Jarovce intersection, i.e. ca 20 m from the North boundary of the CHVÚ. Variant 1 and 2 are identically routed on these places. Therefore the impacts for variants 1 and 3 are identical.
The assessment of the impacts of the intention on the CHVÚ Sysľovské polia in variant 2 is given in Chapter IV.2.1.3.

IV.2.2.4. Impacts on ÚEV Ostrovné lúčky

As the species potentially affected by the intention in variant 2, the following species were assessed in the previous chapter III.2.4: habitat 91E0*, Red Flat Bark Beetle, Stag Beetle, Greater Mouse-eared Bat, Great Capricorn Beetle, European Beaver. Considering the relatively small distance of variant 2 from the ÚEV (approx. 115 m), the following impacts of the intention on protected objects have been identified:

- Noise and light disturbance
- Collisions with vehicles
- Environment pollution (the changes in the immission characteristics, water environment pollution).

V The following part of the text stated the assessment of the influence of the subjects of protection of the ÚEV Ostrovné lúčky by the impacts of the intention, always for the period of construction and operation. During the period of the preparation of the intention, the impact on the subjects of protection shall be zero (0).

Habitat 91E0* - Inundated willow-poplar and alder forests

The impacts of the intention influencing the habitat are only indirect - impact on the quality of the habitat - environment pollution. This habitat is located in the part of the northern part of the ÚEV,

closest to the variant 2 (115 m).

As it is implied by Dispersion Study (Annex F.8. of the zoning and planning decision documentation), exceeding of the limit for ecosystem protection for NOx (30 pg. m-3) on the territory of the ÚEV, the main indicator of pollution of air by traffic, shall not occur. The ÚEV will not be negatively influenced by the increased emissions produced by the intention, although certain increase of concentrations will occur (estimated contribution of 2 - 3 pg. m-3) .

Pollution of water environment - as long as the procedures of disposal of waste water and the procedures applicable to accidents that are stated in the Feasibility Study (Dopravoprojekt Bratislava, 2009) are adhered to, this impact is not expected.

Overall, the impact of implementation of the intention in variant 2 on the habitat 91F0 was evaluated as moderately negative (-1), especially as direct taking of the habitat will not take place and the influence will be marginal.

Red Flat Bark Beetle,(Cucujus cinnaberinus), Stag Beetle (Lucanus cervus) and Great Capricorn Beetle(Cerambyx cerdo)

The impact of the intention that could influence these species is the indirect impact on the quality of the habitat

- pollution of environment, noise and sound disturbance, increased visit rate of the location, and collisions with vehicles. Other impacts were excluded with regard to the distance from the intention and the ecological requirements of the three species.

Light and noise disturbance during the construction phase has been evaluated as insignificant as the adults of all three species fly mostly in late afternoons and evenings (great capricorn beetle) when there are probably no construction activities. Disturbance during day is possible, yet there shall be just time-restricted activities that would not probably influence the presence of these species in a significant way.

It is necessary to assess the collisions of beetles with traffic on the intention as individuals of these species may be attracted by the warm surface of the highway.

The quality of habitats inhabited by these beetles will only be influenced slightly (see above, habitat 91E0*).

Overall, the impact of the implementation of the intention in variant 2 would be for Red Fat Bark Beetle, Stag Beetle a Great Capricorn Beetle assessed as moderately negative (-1). The habitats of these species within the ÚEV will not be affected by permanent taking.

Greater Mouse-eared Bat (Myotis myotis)

The impacts of the intention that may influence the greater mouse-eared bat include:

- Collisions with vehicles
- Environment pollution (water environment pollution)
- Disturbance with noise and lights

Contacts with vehicles (during the operation) may not be altogether excluded, in particular with regards to the mobility of the species. Greater Mouse-eared Bat makes the regular flights to the hunting regions to the distance of 5 - 7 m. However, Greater Mouse-eared Bat usually flies low at the terrain, thus the risk of a collision on high bridges is minimised. It can fly through an underpass with the height of 2 m ((Tomáš Bartonička (ČESON), oral presentation).

The real risk of a collisions then takes place in forest stands and at their edges used by bats as hunting regions where they may fly higher.

For the entire variant, the noise reduction wall is designed in the entire crossing of the Danube and in adjacent forests only as 2 m tall. This does not sufficiently remove the risk of collisions of bats with traffic on the intention. It would be suitable to add a sufficiently high noise reduction wall (at least 4 m) alongside the entire crossing of the Danube and the left-bank alluvial forests.

Water environment pollution (both operation and construction), that could affect the habitats

inhabited by the species. As long as the procedures of disposal of waste water and the procedures applicable to accidents that are stated in the Feasibility Study (Dopravoprojekt Bratislava, 2009) are adhered to, this impact is not expected.
Noise and light disturbance (operation) will be partially eliminated in the location where the intention is closest to the ÚEV by a 2 m noise wall. However, the relatively low height of the wall reduces the effects of the wall. A significant impact of disturbance will be shown if bats fly from ÚEV to the vicinity of the intention in Biskupické luhy, where the height of the noise wall is only 2 m as well. This location is most probably used to prey. Wintering place and summer colonies that are located in the case of this species underground or in the lofts of large buildings probably shall not be affected by noise. During construction, the impact will be insignificant.
In total, the impact of the implementation of the intention in variant 2 on Greater Mouse-eared Bat was assessed as moderately negative (-1). The intention will only influence the preying areas of individuals flying out of the ÚEV. Measures eliminating collisions of individuals of this type with vehicles on the intention (Chapter V) were designed.

European Beaver (Castor fiber)

The impacts of the intention in variant 2 that may influence the beavers are:

- Disturbance with noise and lights
- Collisions with vehicles
- Environment pollution (water environment pollution)

Light and noise disturbance - during construction - the beaver is a night and dusk animal; construction activities will probably not take place then. In addition, construction works will take place in a distance of approx. 115 m from the border of ÚEV. Disturbance during day is possible, yet there shall be just time-restricted activities that would not probably influence the presence of beaver in significant way.
Strong noise will become almost continuous during operation. Noise disturbance will be partially eliminated by the installation of noise walls that will only be installed up to 2 m of height, substantially reducing their effect. The strongest noise disturbance will be under the bridge; beavers will probably discontinue using the territory immediately under the bridges.
The influence could be mitigated by installing noise reducing walls of a sufficient height along the entire length of crossing the ÚEV (see Chapter 5).
Collisions with vehicles (implementation phase) may not be absolutely excluded, however, considering the mobility and intelligence of the species the risk of collision of the beaver with construction machinery is not too realistic. In the operation phase, the risk is completely eliminated in the vicinity of the ÚEV (bridge). The parameters of the bridges also exclude any restriction of migration of beavers alongside the Danube.
Pollution of water environment (operation and construction). As long as the procedures of disposal of waste water and the procedures applicable to accident that are stated in the zoning and planning decision documentation, this impact is not expected.
The migration possibilities of the beaver alongside the river will not be affected considering the parameters of the bridges (operation).
In total, the impact of the implementation of the intention in variant 2 on the European beaver was assessed as moderately negative (-1). The territories of beavers within the ÚEV will not be affected and their migration will not be restricted. However, disturbance around the intention will increase.

IV.2.1.5. Impacts on CHVÚ Lesser Carpathians

None of the variants directly intervene with the CHVÚ. Variants 1 and 2 are routed in the same corridor in this section. Therefore the impacts for variants 1 and 2 are identical. The subjects of

protection in the CHVÚ Malé Karpaty (Lesser Carpathians) will be (considering the rather large distance from the intention - 4.5 km being the shortest distance in the place of the completion of the Ivanka North interchange) affected by a single impact.

- Collisions with vehicles

The assessment of the impacts of the intention on the CHVÚ Malé Karpaty in variant 2 is given in Chapter IV.2.1.5.

IV.2.1.6. Impacts on ÚEV Bratislavské luhy

The species potentially influenced by the intention in variant 2 resulting from Chapter III.2.6 are: barbastelle bat, greater mouse-eared bat, pond bat. With regards to rather large distance of variant 2 from the ÚEV (ca 2.75 m), just one impact of the intention on the subject of protection was identified:

- Collisions with vehicles

V The following part of the text stated the assessment of the influence of the subjects of protection of the ÚEV Bratislavské luhy by the impacts of the intention, always for the period of construction and operation. During the period of the preparation of the intention, the impact on the subjects of protection shall be zero (0).

Greater Mouse-eared Bat (Myotis myotis)

Contacts with vehicles (during the operation) may not be altogether excluded, in particular with regards to the mobility of the species. Greater Mouse-eared Bat makes the regular flights to the hunting regions to the distance of 5 - 7 m. However, greater mouse-eared bat usually flies low at the terrain, thus the risk of a collision on high bridges is minimised. It can fly through an underpass with the height of 2 m ((Tomáš Bartonička (ČESON), oral presentation).
The real risk of a collisions then takes place in forest stands and at their edges used by bats as hunting regions where they may fly higher. The section in left-bank forests is not protected by a sufficiently tall noise wall in variant 2. The noise wall designed for the entire crossing of variant 2 above the Danube and the adjacent alluvial forests is designed with a height of only 2 m, which is insufficient with regard to collisions of bats with vehicles. This may cause losses of individuals of the greater mouse-eared bat in the ÚEV.
The impact of the construction of the intention in variant 2 on the greater mouse-eared bat has been evaluated as moderately negative (-1). To reduce the negative impact, Chapter V proposed measures (installation of sufficiently tall noise walls on the bridges).

Barbastelle (Barbastella barbastellus)

Contacts with vehicles (during the operation) may not be altogether excluded, in particular with regards to the mobility of the species. While detailed information is unavailable, it is able to perform up to 290 km transfers in spring and autumn. The real risk of a collisions then takes place in forest stands and at their edges used by bats as hunting regions where they may fly higher; for variant 2, these are not protected by a sufficiently tall noise wall. The noise wall designed for the entire crossing of variant 2 above the Danube and the adjacent alluvial forests is designed with a height of only 2 m, which is insufficient with regard to collisions of bats with vehicles. This may cause losses of individuals of the barbastelle in the ÚEV.
It was recently found that one of the important factors influencing the flying over the intention by bats is the density of traffic on the road. Bats often refuse to try to fly over roads with high traffic density (such as the foreseen intention) (Tomáš Bartonička (ČESON), oral presentation).
This reduced the risk of collisions with vehicles on the road but increases the fragmentation of territory for bats.

The impact of the construction of the intention in variant 2 on the greater mouse-eared bat has been evaluated as moderately negative (-1). To reduce the negative impact, Chapter V proposed measures (installation of sufficiently tall noise walls on the bridges).

Pond Bat (Myotis dasycneme)

Contacts with vehicles (during the operation) may not be altogether excluded, in particular with regards to the mobility of the species. Due to the usual lack of underground premises in the periods of summer presence, it is forced to perform spring and autumn transfers of up to 330 km. However, bats of the Myotis family usually fly low over terrain, minimizing the risk of collision on high bridges (Tomáš Bartonička (ČESON), oral presentation).
The real risk of a collisions then takes place in the summer above water surfaces that it uses for preying (potentially flying higher); for variant 2, these are not protected by a sufficiently tall noise wall (bridging of the Danube). This may cause losses of individuals of the pond bat in the ÚEV.
The impact of the construction of the intention in variant 2 on the greater mouse-eared bat has been evaluated as moderately negative (-1). To reduce the negative impact, Chapter V proposed measures (installation of sufficiently tall noise walls on the bridges).

IV.3. Assessment of Cumulative Impacts

The current urban plan of a large territorial unit of Bratislava region, the urban plan of the capital city of the Slovak Republic, Bratislava and also the information system of SEA/EIA were used for the assessment of the cumulative impacts in particular.

The assessed intention is located in the wider surroundings of the capital city of Bratislava that is exposed to rather strong pressures on the exploitation of the territory.

From amongst the existing structures that significantly participate in the cumulative impacts, this regards the following: D1 highway, Bratislava - Trnava, 6-lane section - the current highway will cross the D4 highway in the Ivanka North interchange.
Highway D2 – route: state boundary between CZ/SK (Lanžhot – Brodské) – Malacky – Bratislava – state border between SK/HU (Čunovo – Rajka), 4-lane. The current D2 highway will cross the assessed section of the D4 highway in the Bratislava - Jarovce flyover interchange.
D4 highway, AT/SK state border (Jarovce) - Bratislava, Jarovce (crossing with D2), 4 lanes - the section assessed here represents a prolongation of the D4 from the Jarovce interchange.
The following is stated as the public utility structures in the binding part of the Upper-tier Territorial Unit of Bratislava region.
D4 highway, Ivanka North - Rača - structure continuing on the assessed section of the D4 highway. They shall form the bypass of Bratislava together with the other sections of highway D4.
R1 expressway, Most pri Bratislave – Vlčkovce – a structure connecting to the section of the D4 highway assessed here in the Podunajské Biskupice intersection This section runs in parallel (ca 10 km) to the South-east with the existing highway D1 in the direction to Trnava.
R7 expressway, BA Prievoz - BA Ketelec – a structure connecting to the section of the D4 highway assessed here in the Ketelec intersection It is expected that the construction will take place concurrently with the assessed section of the D4 highway (2016 - 2019).
R7 expressway, BA Ketelec – Dunajská Lužná - this is a continuation of the expressway from the Ketelec interchange eastwards. The R7 continues alongside the Danube River to Dunajská Streda – Nové Zámky – Veľký Krtíš. It shall connect to the planned R2 to Košice near Lučenec.
The route of high-speedway (VRT) within the boundaries of the city of Bratislava from the central cargo station alongside the highway D1 to Čierna voda turn and father alongside the highway D1 towards the Váh River region.
The areas for the construction of a parallel runway to the existing runway 13-31 and areas for

building of the necessary infrastructure at the M. R. Štefánik Airport. The areas are closely adjacent to the proposed intention, westwards therefrom.
The territory and equipment of the Waterworks Wolfsthal. This waterworks should be located ca 11.5 km up the Danube River stream from the territories belonging to Natura 2000 system assessed here. This would mean the influence of water level in the area under the stage, the influence on habitats in the territory assessed here may not be excluded.
Schwechat – Slovnaft oil pipeline and product ducts. The connection of Slovnaft with Austria. The corridor established in the zoning plan of Bratislava runs through the territory of a Natura 2000 system (CHVÚ Dunajské luhy and ÚEV Biskupické luhy – to the north of the Kopáčsky island).
High-pressure gas line Slovnaft-Petržalka-Einsteinova-Mlynská dolina. The route shall run through the CHVÚ Dunajské luhy and ÚEV Biskupické luhy – to the north of Kopáč Island.
Harbours, landing stages and related structures of transport and technical infrastructure of harbours of waterway transport on the Danube River.
Furthermore, they proposed the development function area in the area of the rowing channel at Jarovce branch and also rather vast development function area to the North.east from GSI Jarovce. The industrial area is located to the North of the existing communication E58 between GSI Jarovce and the state boundary between the Slovak Republic and Austria in the proposal.

The aforementioned extensive list of planned intentions implies that the surroundings of the assessed intention is under a notable pressure of development activities.

This regards mainly the structures of the existing transport infrastructure and industrial activities representing rather dense network in the complicated territory. If infrastructural construction (see above), development areas for residential zones and industrial areas are added to the existing intention, it is clear that the environmentally acceptable level for keeping the objects of the individual locations of Natura 2000 system in a condition favourable from protection point of view could easily be exceeded.

In the case of the CHVÚ Dunajské luhy, the capacity of environment has already been exceeded, for the intention assessed here. With regards to the CHVÚ Dunajské luhy and ÚEV Biskupické luhy, the other intentions of line structures are planed too (oil pipeline and product duct of Schwechat – Slovnaft and the high-pressure gas line of Slovnaft-Petržalka-Einsteinova-Mlynská dolina), that shall cut the left-side Danube inundated forests in the North part and they shall represent another loss of valued habitats.. The planned R7 expressway will then separate the locations to the east from the Kopáčsky Island (the connection to the Ketelec interchange). In addition to the increase in noise disturbance and habitat seizure, it shall bring about also the deterioration of the migration permeability of the territory.

In general, the greatest problem shall be the high spatial fragmentation of the territory and the seizure of valuable habitats together with a significant increase in noise pollution in the case of some types of structures.
For all foreseen structures, it is necessary to respect increased protection of individual locations of the Natura 2000 system and their protected objects and to perform the measures necessary to minimize the impacts of these intentions. Together with a wise selection of territory for locating the above intentions that could reduce the costs of performance of necessary protective measures, it is the only way that could prevent further exceeding of a bearable level of environmental load.

IV. *4. Assessment of Impacts of Intention on Location Integrity*

For CHVÚ and ÚEV, integrity means sustained quality of the location from the viewpoint of fulfilling of its ecological functions in relation to protected objects - i.e., impacts on protected objects cannot be evaluated without considering integrity and vice versa. In a dynamic perception, it is the ability of ecosystems to continue operating in a manner favourable for the protected

objects from the viewpoint of preserving and/or improvement of their current condition. This term must also be understood in a wider sense (see "Integrity" in the text of the sites directive), not only topographically or geographically but also from the aspects of time, population, etc. Disturbance of integrity may thus also mean that the species diversity of individual habitats decreases, natural communication channels or migration paths are interrupted, or ecosystems change by unintentional implanting of new species.
The significance of impacts on the integrity of Natura 2000 locations is not exactly defined in EU law. Within the member states of the EU, however, a consensus exists that significant impact on location integrity occurs if significant negative influence on at least one of the protected objects is documented. Naturally, it is suitable to consider the impact as significantly negative also if the sum of slightly negative impacts is serious enough to make the overall view invoke a need to assess the impact on ecological functions as significantly negative.
However, not such situation occurred in this assessment.

On the basis of this view, the following summary conclusion about the impact of the assessed intention on the integrity of the affected locations of the Natura 2000 system was expressed.
This chapter provides a transparent overview (in tables) of the results of the performed assessment both for individual territories of the Natura 2000 system and for protected objects. Impacts are shown by variants.
The results of the assessment are explained in detail in Chapter IV.2. In line with the methodological manual, impacts of the technical solutions that was submitted in the zoning permit documentation (variant 1) and/or Feasibility Study (variant 2) were assessed, i.e. with no mitigating measures. The measures for the next step of preparation are listed in Chapter V.

IV.4.1. Variant 1 (red)

The construction of the intention in this variant will significantly influence the nesting habitats of several protected objects in CHVÚ Dunajské luhy. The species are black stork, black kite and white-tailed eagle. Nesting locations of these bird species are rare as they are usually located only in vast forest complexes with certain parameters. This is why they require strict protection.
The project (at the zoning permit documentation level) that not only plans connecting the left-bank cycling route alongside the Danube to the D4 bridge over the Danube for pedestrians and cyclists but also intends to build a service road/cycling route under the bridge in the territory of left-bank alluvial forests (with connection to the left-bank cycling route on one side and to a network of field and forest paths on the other side) would present an unwanted increase of the visit rate in the area of Biskupické luhy.
Other ecological functions will not be significantly affected by the intention.
Thus, the assessed intention in variant 1 has a significant negative impact on the integrity of CHVÚ Dunajské luhy from the viewpoint of the following protected objects: black stork, black kite, white-tailed eagle.
The impact on the integrity of other affected locations (ÚEV Biskupické luhy, CHVÚ Sysľovské polia, ÚEV Ostrovné lúčky, CHVÚ Malé Karpaty) is not significantly negative in variant 1.

IV.4.2. Variant 2 (green)

The construction of the intention in this variant will significantly influence the nesting habitats of several protected objects in CHVÚ Dunajské luhy. The species are black stork, black kite and white-tailed eagle. Nesting locations of these bird species are rare as they are usually located only in vast forest complexes with certain parameters. This is why they require strict protection.
V In the present technical form (without noise walls along the entire length of the crossing of Natura 2000 locations with correct parameters), the area of the territory significantly influenced by noise exceeding 50 dB within the CHVÚ is approx. 412.95 ha, or 2.5% of the total area of the CHVÚ. This percentage is rather high; it is also necessary to reflect the fact that protected timid bird species live here (black stork, black kite, and white-tailed eagle). Due to the same reason (non-existence of sufficient barriers), collisions with passing vehicles were also evaluated as

significantly negative.
Other ecological functions will not be significantly affected by the intention.
V In the case of ÚEV Biskupické luhy, impact on habitat 91G0* has been assessed as significantly negative. The reason is the large percentage of taking of the habitat which, while not too representative, transits to the stands of habitat 91F0, and has a development potential to become a better quality habitat.
Thus, the assessed intention in variant 2 has a significant negative impact on the integrity of CHVÚ Dunajské luhy from the viewpoint of the following protected objects: black stork, black kite, white-tailed eagle. The integrity of ÚEV Biskupické luhy is affected from the viewpoint of habitat 91G0*.

The impact on the integrity of other affected locations (CHVÚ Sysľovské polia, ÚEV Ostrovné lúčky, CHVÚ Malé Karpaty) is not significantly negative in variant 2.

Table 25: Overview of significance of impacts on individual protected objects by individual variants.

CHVÚ Dunajské luhy			
The subjects of protection		Impact assessment	
		Variant 1 - Red	Variant 2- Green
Black Stork	*Ciconia nigra*	-2	-2
Sand Martin	*Riparia riparia*	-1	-1
Little Bittern	*Ixobrychus minutus*	-1	-1
Mediterranean Gull	*Larus melanocephalus*	-1	-1
Black Kite	*Milvus migrans*	-2	-2
Common Goldeneye	*Bucephala clangula*	-1	-1
Red-crested Pochard	*Netta rufina*	-1	-1
Common Pochard	*Aythya ferina*	-1	-1
Tufted Duck	*Aythya fuligula*	-1	-1
Garganey	*Anas querquedula*	-1	-1
Gadwall	*Anas strepera*	-1	-1
Common Redshank	*Tringa totanus*	-1	-1
Marsh Harriers	*Circus aeruginosus*	-1	-1
Tawny Pipit	*Anthus campestris*	-1	-1
White-tailed Eagle	*Haliaeetus albicilla*	-2	-2
Smew	*Mergellus albellus*	-1	-1
Common Tern	*Sterna hirundo*	-1	-1
Common Kingfisher	*Alcedo atthis*	-1	-1
Little Egret	*Egretta garzetta*	-1	-1
migrating birds #		-1	-1

ÚEV Biskupické luhy			
The subjects of protection		Impact assessment	
		Variant 1 - Red	Variant 2- Green
habitat 3150	Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type	-1	0
habitat 6210	Xerophilous grass and herb bushy stands on lime subsoil (*important sites of *Orchideaceae)*	0	0
habitat 91F0	Inundated oak-elm-ash forests alongside lowland rivers	-1	-1
habitat 91G0*	The Carpathian and Pannonian oak and hornbeam forests	0	-2
habitat 91H0*	Thermophilic Pannonian oak forests	0	0

Bullhead	*Cottus gobio*	0	0
European fire-bellied toad	*Bombina bombina*	-1	-1
Stag beetle	*Lucanus cervus*	-1	-1
Great capricorn beetle	*Cerambyx cerdo*	-1	-1
Kessler's gudgeon	*Gobio kessleri*	0	0
Danube ruffe	*Gymnocephalus baloni*	0	0
European Beaver	*Castor fiber*	-1	-1
Mehelyi's Root Vole	*Microtus oeconomus mehelyi*	-1	-1
CHVÚ Sysľovské polia			
The subjects of protection		Impact assessment	
		Variant 1 - Red	Variant 2- Green
Great Bustard	*Otis tarda*	-1	-1
Greater White-fronted Goose	*Anser anbifrons*	-1	-1
Taiga Bean Goose	*Anser fabalis*	-1	-1
Red-footed Falcon	*Falco vespertinus*	-1	-1
ÚEV Ostrovné lúčky			
The subjects of protection		Impact assessment	
		Variant 1 - Red	Variant 2- Green
habitat 3150	Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type	0	0
habitat 6210	Xerophilous grass and herb bushy stands on lime subsoil (*important sites of *Orchideaceae)*	0	0
habitat 91F0	Inundated oak-elm-ash forests alongside lowland rivers	0	0
habitat 91E0*	Inundated willow-poplar and alder forests	0	-1
Flat bark beetle	*Cucujus cinnaberinus*	0	-1
Bullhead	*Cottus gobio*	0	0
European fire-bellied toad	*Bombina bombina*	0	0
Stag beetle	*Lucanus cervus*	0	-1
Greater mouse-eared bat	*Myotis myotis*	-1	-1
Great capricorn beetle	*Cerambyx cerdo*	0	-1
Amur bitterling	*Rhodeus sericeus amarus*	0	0
Streber	*Zingel streber*	0	0
Kessler's gudgeon	*Gobio kessleri*	0	0

91E0*	Inundated willow-poplar and alder forests	0	0
91F0	Inundated oak-elm-ash forests alongside lowland rivers	0	0
Flat bark beetle	Cucujus cinnaberinus	0	0
Bullhead	Cottus gobio	0	0
European fire-bellied toad	Bombina bombina	0	0
Eastern eggar	Eriogaster catax	0	0
Stag beetle	Lucanus cervus	0	0
Large copper	Lycaena dispar	0	0
Greater mouse-eared bat	*Myotis myotis*	0	-1
Barbastelle bat	*Barnastella barbastellus*	0	-1
Pond bat	*Myotis dasycneme*	0	-1
Amur bitterling	Rhodeus sericeus amarus	0	0
Scarce large blue	Maculinea teleius	0	0
Thick shelved river mussel	Unio crassus	0	0
Streber	Zingel streber	0	0
Kessler's gudgeon	Gobio kessleri	0	0
Hungarian quaker	Dioszeghyana schmidtii	0	0
Fenton's wood white	Leptidea morsei	0	0
Dragonfly	Leucorrhinia pectoralis	0	0
Danube ruffe	Gymnocephalus baloni	0	0
White-finned gudgeon	Gobio albipinnatus	0	0
Danube crested newt	Triturus dobrogicus	0	0
March fritillary	Euphydryas aurinia	0	0
Water beetle	Graphoderus bilineatus	0	0
Golden spined loach	Sabanejewia aurata	0	0
European Beaver	Castor fiber	0	0
Common Stonechat	*Caxicola torquata*	0	0
European Turtle Dove	*Streptopelia turtur*	0	0
Eastern Imperial Eagle	*Aquila heliaca*	-1	-1

CHVÚ Dunajské luhy

ÚEV Bratislavské luhy			
The subjects of protection		Impact assessment	
		Variant 1 - Red	Variant 2- Green
3150	Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type	0	0
3260	3260 Lowland to montane water curses with the vegetation of Ranunculion fluitantis and Callitricho- Batrachion association	0	0

CHVÚ is declared also for the purpose of the provision of a favourable condition of the habitats and the assurance of the conditions for survival and reproduction of migrating water birds creating groups during migration or wintering, in particular the species named in Annex 1 to the Regulation of the Ministry of Environment of the Slovak Republic of 24 October declaring the

All variants in their current technical condition were thus evaluated from the viewpoint of impacts on the Natura 2000 system as unsuitable for construction.

A significant negative impact (-2) as such cannot be eliminated by any mitigating measures within this assessment. The construction of the intention is only possible after adopting compensatory measures (in line with Article 28(6) of the Act no. 543/2002 Coll. as amended) that will be, in a comparable scope, aimed at unfavourable influenced habitats and species of European significance and functions of the territory of CHVÚ Dunajské luhy. It must also be documented that no alternative solution exists and the intention needs to be implemented due to urgent reasons of higher public interest, including interests of social and economic nature.

Table 26: Overall overview of evaluation of impact of variants on integrity of individual affected locations

	Variant	
	1 - red	2 - green
CHVÚ Dunajské luhy	-2	-2
ÚEV Biskupické luhy	-1	-2
CHVÚ Sysľovské polia	-1	-1
ÚEV Ostrovné lúčky	-1	-1
CHVÚ Malé Karpaty	-1	-1
ÚEV Bratislavské luhy	0	-1
Overall evaluation (impact on location integrity)	-2	-2

0 - no impact
-1 - moderate negative impact
-2 - significant negative impact
Note: The evaluation of the impacts on Natura 2000 sites is not a simple arithmetic average of the values specified in the text; the tabulated value was obtained by an expert opinion.

V. PROPOSAL OF MEASURES

As the impacts of both variants were assessed as significantly negative (-2), it is not suitable to propose any mitigating measures.
However, if compensatory measures in line with Article 28(6) of the Act no. 543/2002 Coll. are adopted, making it possible to implement one of the variants of the intention, we recommend reflecting the following measures in future project preparation:

Project preparation phase:

- Design the road sewage system with a sufficient capacity so that hazardous substances from traffic (oil substances, tyre wear, brake wear, etc.) are always entrapped. The administrator of the road shall regularly check the safety elements for water protection and maintain them in a fully operable condition.
- Draining of bridge structures (the Danube and Little Danube Rivers and other water courses) shall be provided by sewer systems with routing to sufficiently dimensioned safety elements for water protection, such as those designed in the current project documentation for both variants.
- As for the bridge structures crossing locations of the Natura 2000 system, the silent expansion blocks shall be used to reduce the noise in the area under the bridge.
- If variant 2 is constructed, non-transparent and non-translucent bilateral noise walls must be included in the entire length of the crossing over CHVÚ Dunajské luhy and CHVÚ Biskupické luhy. The minimum height of these walls should be 4 m.

Implementation phase:

- Observing of conditions specified in the construction permit for the intention shall be regularly checked by the eco-supervisor of the construction.

- Cutting of trees in the zone taken by the structure shall take place outside the nesting period of birds.
- In the proximity of the Biskupické arm (approx. km 4.590 – 4.720 of the intention), soil removal must be done outside the reproduction period of the root vole (in the months of December and January at the best).
- During construction, it is necessary to level any terrain depressions immediately if they could contain still water and become a habitat for reproduction of amphibians. If necessary, migration barriers shall be installed during the construction for the protection of amphibians.
- For intentions located in protected water areas, it is suitable to add an emergency package containing an absorbent to the equipment of construction machinery. In these areas, absorbent must also be ready at the site, in sufficient quantities. Biodegradable operating fluids must be used, and all machinery working in the areas must be in a suitable technical condition (no dripping), avoid any risk of contamination of the surroundings by dangerous construction materials (including substances with alkaline reactions).
- Construction yards and material dump sites shall be located outside the territories of the Natura 2000 system.
- Adhere to the emergency plan and all valid provisions of law.

Appropriate assessment of impact of intention on territories of European

importance and protected avian territories ***Operating phase***:

- Through the representatives of the ŠOP SR, the relevant self-governments and SVP, š.p. it is necessary to prevent the locating new stands with refreshments alongside the entire left-bank cycling route in the area of CHVÚ Dunajské luhy in order to minimize the disturbing of birds by tourists and sportsmen.
- The construction must not disturb the existing system of bars and barriers preventing from unauthorized driving into the area of CHVÚ Dunajské luhy on both sides of the Danube River. This is to minimize disturbing by increased visit rates in the CHVÚ Dunajské luhy.
- The space under the flyover bridge shall be left as much as possible in a natural condition (ideally, clay subsoil with rocks in enclaves with fractions up to 30 cm that will increase the variability of environment) while respecting the needs and requirements of the maintenance of the bridge body.
- Prevent from expansion of invasive plant species into the areas with removed vegetation cover during the construction. It is necessary to perform regular inspections and removal of invasive plants so that the habitats in the proximity of the intention are not devalued after the return to a close-to-nature condition.

VI. CONCLUSION - COMPARISON OF ASSESSED VARIANTS

The above Appropriate Assessment was elaborated according to the Methodological guide to the provisions of Articles 6(3) and 6(4) of the Directive on conservation of natural habitats and of wild fauna and flora No. 92/43/EEC. This assessment included a detailed evaluation of impacts of two variants of D4 highway, Jarovce - Ivanka, north to 6 locations of the Natura 2000 system and their protected objects - CHVU Dunajské luhy (SKCHVU007), ÚEV Biskupické luhy (SKUEV0295), CHVÚ Sysľovské polia (SKCHVU029), ÚEV Ostrovné lúčky (SKUEV0269), ÚEV Bratislavské luhy (SKUEV0064), and CHVÚ Malé Karpaty (SKCHVU014).

The assessment of impacts was made for each protected object in each location of the Natura 2000 system. Impact was influenced on a sequence of 0 (zero impact), -1 (moderate negative impact), -2 (significant negative impact). The -2 level corresponds to the impact on integrity of Natura 2000 locations that the Directive "on sites" (92/43/EEC) calls, in article 6.3, as significant.

Basing on the elaborated assessment, it can be concluded that the D4 highway forms, in both variants, a significantly negative impact on the integrity of the Natura 2000 system, specifically on CHVÚ Dunajské luhy (SKCHVU007) and in the case of variant 2, also on ÚEV Biskupické luhy
(SKUEV0295); the impact of variant 2 can be considered as more negative compared to variant 1.

Variant 1 - significantly negative impact under directive 92/43/EEC was identified for the following 3 bird species: black stork (Ciconia nigra), black kite (Milvus migrans) and white-tailed eagle (Haliaeetus albicilla). In the case of these species, the significant impact is the taking of habitats.

Variant 2 - significant negative impact under directive 92/43/EEC was identified for the priority habitat of European importance 91G0*, where approximately 3.2% of the area of the habitat will be destroyed in ÚEV Biskupické luhy. While the habitat is not too representative, is has a potential of changing to a better quality type.

Significant negative impact was also identified for the following 3 bird species that are protected

in CHVÚ Dunajské luhy: black stork (Ciconia nigra), black kite (Milvus migrans) and white-tailed eagle (Haliaeetus albicilla). The significant negative impact was assessed due to the impact on the nesting habitat of these species, high risk of collisions with passing vehicles in the territory of alluvial forests, and on the basis of significant noise disturbance within the CHVÚ.

The performance of the intention is only possible after adopting compensatory measures that will, in a comparable scope, focus on unfavourably influenced habitats and species of European significance and functions of territories, and after fulfilling further conditions (under Article 28(6) of the Act no. 534/2002 Coll. as amended).

The impact on the integrity of other affected locations (ÚEV Biskupické luhy - for variant 1, CHVÚ Sysľovské polia, ÚEV Ostrovné lúčky, CHVÚ Malé Karpaty, ÚEV Bratislavské luhy) is not significantly negative in any of the variants of the intention.

V In case of adoption of compensatory measures, Variant 1 (red) seems to be the more suitable for construction from the viewpoint of impacts on Natura 2000 locations, as it has the lowest impact on the Natura 2000 system. The reasons are mostly in the smaller taking of habitats with European significance and total overall taking in the ÚEV Biskupické luhy, larger distance from ÚEV Ostrovné lúčky, and more suitable technical solution influencing the size of impacts on the protected objects in the Natura 2000 locations.

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ANNEXES:

Annex	*1*	Photographic documentation
Annex	*2*	Comprehensive situation of assessed variants (1:70 000)
Annex	*3*	Detailed situation of intention in proximity of CHVÚ Sysľovské polia (1:20 000)
Annex	*4*	Detailed situation of intention in place of crossing the Danube (1:20 000)

Fig. 1: View of the Danube approximately where bridged by variant 1 (red)
Fig. 2: Traces of beaver presence on the bank of the Danube

Obrázok 1 : Pohľad na tok Dunaja, približne v mieste premostenia Variantom 1 (červený).

Obrázok 2: Pobytové stopy bobra (ohryzy) na brehu toku Dunaja.

Fig. 3: Borrow pit at the Jarovecké arm, narrowly avoided by variant 1
Obrázok 3: Zemník pri Jaroveckom ramene. Zámer ho vo Variante 1 tesne obchádza.

Figure 4: **Biskupické arm – northern end.**

Fig. 5: Dam at the Biskupické arm. The flow volume is very small here
Obrázok 5: Hrádzka na Biskupickom ramene. Prietok je v tejto časti veľmi malý.

Figure 6: View of the Biskupické arm (ÚEV Biskupické luhy, CHVU Dunajské luhy).

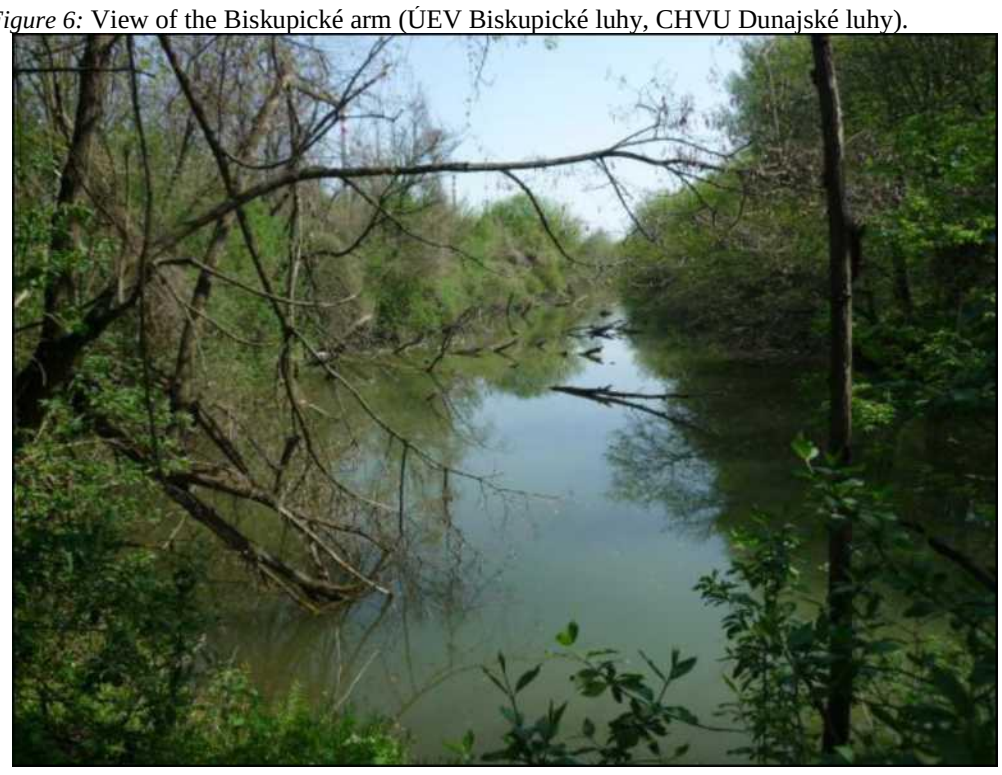

Figure7: **Southern end of the Biskupického arm, led to the seepage channel. Close to the location of crossing with variant 1.**

Figure 8: **Kopáčsky island – steppe habitats**

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The name of this document in Slovak is *Primerané posúdenie vplyvu zámeru na územia európskeho významu a chránené vtáčie územia*. The file name has not been changed.

This document contains three map pages at the end. To view them, please see the Slovak original.

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Project Implementation Services, spol. s r. o.
Consultant under Consultancy Contract C31934

D4 HIGHWAY BRATISLAVA, JAROVCE – IVANKA NORTH

The Proposal of Compensatory Measures

NÁRODNÁ DIAĽNIČNÁ SPOLOČNOSŤ

Národná diaľničná spoločnosť, a.s., Mlynské Nivy 45, 821 09 Bratislava

DOPRAVOPROJEKT

DOPRAVOPROJEKT, a.s., Kominárska 2, 832 03 Bratislava

HBH projekt

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Banská Bystrica, July 2014

Contents

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Annex 1: Schedule of Implementation of Compensatory Measures

Annex 2: Detailed Implementation Project of Compensatory Measures

Annex 3: Nature Protection Organisations

Annex 4 The Map of Compensatory Measures

Annex 5 The Clear Situation of Impacts and Mitigating Measures

I. BASIC DATA ON THE PROPOSER

I.1. Name

Národná diaľničná spoločnosť, a.s.

I.2. Identification No.

35 919 001

I.3. Registered office

Mlynské nivy 45, 821 09 Bratislava

I.4. Name, surname, address, telephone number and other contact data of the authorized representative of the Proposer

Ing. Pavol Kováčik, PhD., MBA

Investment Director and Vice-chairman of the Board of Directors,
Národná diaľničná spoločnosť, a.s., Mlynské Nivy 45, 821 09 Bratislava
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I.5. Name, surname, address, telephone number and other contact data of the person from which it is possible to obtain the relevant information about the proposed activity and the proposed compensatory measures

Ing. Anna Holásková
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I.6. Information whether the proposal comprises the information that may not be published and why

The project comprises no information that may not be published.

II. THE DESCRIPTION OF THE PLAN OR PROJECT

II.1. Name of the plan/project

D4 Highway Bratislava, Jarovce – Ivanka North

II.2 The brief description of the plan or project affecting the location of the protected area system

The construction of "Highway D4 Bratislava, Jarovce – Ivanka North" begins by the connection to the existing highway D2 in the GSI "Jarovce", on the territory of the capital city of the Slovak Republic, in the municipal part Bratislava – Jarovce. The highway D4 is lead on the following route:

- ***In the section from 0.000 - 4.851***, to the North of Jarovce in the route of variant "E" - green (in accord with the recommendation of the Ministry of Environment of the Slovak Republic in the Final Opinion of EIA Process No. 318/2010-3.4/ml of 28.9.2011), by overpass bridges above the road III/2046, above the railway route of Bratislava – Rusovce and above the relaying of road I/2 in the grade separated intersection "Rusovce", further by a bridge above Jarovce branch, through rowing track and above the Danube river, further on the left bank of the Danube river by a flyover bridge over the protected territory of the European importance SKÚEV 0295 Biskupické Luhy (Natura 2000), outside PR Gajc.
  The negative impacts of the passage of highway D4 through this territory shall be eliminated by leading the highway on a flyover bridge (the overall length of the flyover bridge is 3,152 m).
- ***In the section from km 4.851 – 8.500*** the route of highway D4 passes from variant "E" – green to variant "C" – red (in accord with the recommendation of the Ministry of Environment of the Slovak Republic in the Final Opinion of EIA Process No. 318/2010-3.4/ml of 28.9.2011), while it bypasses the gravel mining area of Podunajské Biskupice from South and East. In km 6.736 the D4 crosses the planned expressway R7 by underpass in GSU "Ketelec" and in km 7.962 it crosses the access road to gamekeeper's lodge in Topoľové by underpass. When compared to the original route assessed in the EIA process, in accord with the recommendations of the Final Opinion of EIA Process No. 5461/07-7.3/ml for R7 Bratislava – Dunajská Lužná of 9.5.2009, , the route of highway D4 is shifted in GSI "Ketelec" by ca 235 to the North, while the location of highway D4, expressway R7 and the shape of GSI "Ketelec" are based on the blue variant (A2), recommended in the Technical Study "Expressway R7 Bratislava Ketelec – Bratislava Prievoz and from the design proposed in the zoning and planning decision documentation for "Expressway R7 Bratislava – Dunajská Lužná".

A large bilateral pull-off site "Rovinka" is designed between km 8.300 to 9.350.

- ***In the section from km 8.500 – 15.000*** the route of highway D4 continues in the route of variant "C" - red (in accord with the recommendation of the Ministry of Environment of the Slovak Republic in the Final Opinion of EIA Process No. 318/2010-3.4/ml of 28.9.2011), in the cadastral territory of Podunajské Biskupice, where it crosses by overpass the old Danube embankment (a cultural and technical monument), the road I/63 in the GSI "Rovinka" between Podunajské Biskupice and the village of Rovinka, it passes by the area of Strabag, a.s. from south, it crosses the railway track of Bratislava – Dunajská Streda by overpass bridge, and crosses Vinohradnícka street by underpass between Podunajské Biskupice and the village of Miloslavov.

In km 14.500, they plan to construct a grade separated intersection "Podunajské Biskupice" (D4 with R1). Further, the route of highway D4 continues to the West of village of Most pri Bratislave.

- ***In the section from km 15.000 – 22.590076,*** the route of highway D4 continues in the route of variant "C" - red (in accordance with the recommendation of the Ministry of Environment of the Slovak Republic in the Final Opinion of EIA Process No. 318/2010-3.4/ml of 28.9.2011), with the specification of directional run of the highway D4 pursuant to the recommended variant in the Technical Study "Highway D4 Bratislava, km 15.0 – Ivanka North intersection– Rača intersection" (elaborated in 10.2012 by the Association "D4 Bratislava, Jarovce – Rača") on the basis of the geodetic survey of the terrain while respecting the protective zones and interests of the airport of M.R.Štefánik.

The route of highway D4 continues to the West of the village of Most pri Bratislava, where it intersects the road II/572 at GSI "Most pri Bratislave", crosses the Little Danube River by a bridge and bypasses the gravel pit Zelená voda from the West. It bypasses the airport of M.R. Štefánik, continues in concurrence with Šúrsky kanál Channel to the West of the village of Ivanka pri Dunaji, intersects the road I/61 Bratislava - Senec at GSI "Ivanka - West", it intersects the railway route of Bratislava - Štúrovo by a grade separated bridge and ends at the GSI "Ivanka - North, by connecting to the existing highway D1, while the highway D4 is lead under the existing D1.

The overall length of the designed section is 22.590 076 km.

II.3. Description and location of all activities and project parts with a possible impact on the biotopes of European importance, the species of European importance, the biotopes of the species of European importance, birds, including migrating species and their biotopes and the overall coherence of the European system of protected territories

In the section from ca km 2.600 to 5.300, the structure shall pass the territory of the location belonging to Natura 2000 network (km 2.674 – 4.584 through the CHVÚ Dunajské Luhy, km 4.584 – 5.320 through the ÚEV Biskupické luhy).
The entire protected territory is located on the flyover bridge having the length of 3,152 m, the adjacent sections of highway D4 are lead in the filling or smaller bridge objects.

In the section of passage through the protected territories, forest biotopes under flyover bridge shall be liquidated and tree cut to the inevitable extent (the temporary seizure by structure), including the stands in the bank, in addition it shall come to the seizure of the grassland and the seizure of agricultural land.

In addition to the seizures of necessary areas, the construction and operation of the highway shall mean the new accumulation in the emission load of the territory and the disturbance in the form of noise and human activities related in particular to the construction of the highway.

The part of the intention is also the interconnection of left-side and right-side cycling route using the bridges on D4, which will bring the growth in tourism activities also on the left bank of the Danube river, thus in area that has not been exploited in notably intense way till now, for the reason of worse accessibility, than the right side of the river. Thus also the disturbing impact on the surrounding area shall automatically increase.

Water areas under the bridges shall be touched only on the place of the construction of pillars in the water course (the location of the pillars directly in the water course is taken into account only in the main stream of the Danube River).

All the above activities of a human with regards to the highway D4 as a separate structure and the operation of the highway and the development of tourism activities in the territory shall mean the new impacts in the territory, including the impacts on the overall coherence of the European system of protected territories.

The activities may be summarized as follows:

- Direct seizure of the biotopes
- Influencing of the use of nesting and feeding biotopes or other exploitation of the territory of the concerned subjects of protection due to the impact of noise and emissions coming from the highway
- The increase in the tourist activities sin the territory by the increase of the scope of cycling routes and their interconnection, which shall relate to the increase in the noise level and the direct impact on the subjects of protection (wilful or unintentional killing of individuals, direct or indirect interventions in the biotopes)

III. THE ASSESSMENT OF NEGATIVE IMPACTS

III.1. Name and code of the affected locations of the system of protected territories

On the basis of the identified inputs and outputs of the intention, on the basis of the location of the intention in the territory and on the basis of further substantial characteristics of the territory, the following Territories of European Importance (hereinafter referred to as the "EÚV" as well) and the Protected Avian Territories (hereinafter referred to as the "CHVÚ" as well) were selected as the concerned ones:

CHVÚ Dunajské luhy (SKCHVU007)

ÚEV Biskupické luhy (SKUEV0295)

CHVÚ Sysľovské polia (SKCHVU029)

ÚEV Ostrovné lúčky (SKUEV0269)

CHVÚ Malé Karpaty (SKCHVU014)

ÚEV Bratislavské luhy (SKUEV0064)

There are also other ÚEVs in the wider surroundings of the intention, however they were assessed as non-impacted by the intention. The reason is mainly the distance of the locations from the intention related to the subjects of protection, for which the locations of Natura 2000 system were declared and the size of their territories (thus the consideration of the chance of occurrence of the subject of protection in the proximity of the intention, or other type of impact by the intention).

The following locations are considered:

ÚEV Hrušov (SKUEV0270)

ÚEV Šúr (SKUEV0279)

ÚEV Homoľské Karpaty (SKUEV0104)

III.2. Subject of the protection of the affected locations of the system of protected territories

CHVÚ Dunajské luhy

Table 1: In the Protected Avian Territory (CHVÚ), the following bird species are the subject of protection:

Slovak name	Latin name	Supposed count of nesting pairs[1]			Count of individuals wintering in the SR[2]
		in CHVÚ	in the SR	in the EU (thou.)	
Black Stork	*Ciconia nigra*	4 - 6	400 - 600	7.8 - 12	0 - 2
Sand Martin	*Riparia riparia*	180 - 420	10 – 20 thou.	5,400 - 9,500	0
Little Bittern	*Ixobrychus minutus*	12 - 34	200 - 400	60 – 120	0
Mediterranean Gull	*Larus melanocephalus*	30 - 70	50 - 125	120 - 320	0

[1]Reporting Article 12 v 1.1, Database, quoted on 4.2.2014. Available at: https://www.sopsr.sk/reporting/2012/, European Environment Agency, quoted on 4.2. 2014. Available at: http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=SKCHVU007

[2]Reporting Article 12 v 1.1, Database, quoted on 4.2.2014. Available at: https://www.sopsr.sk/reporting/2012/

Black Kite	*Milvus migrans*	5 - 6	15 - 20	64 - 100	0
Common Goldeneye	*Bucephala clangula*	0	0	490 - 590	9,000
Red-crested Pochard	*Netta rufina*	7 - 18	10 - 40	27 - 59	0 - 10
Common Pochard	*Aythya ferina*	0	500 - 1,000	210 - 440	6,300 - 6,900
Tufted Duck	*Aythya fuligula*	0	250 - 500	730 - 880	25,000 -
Garganey	*Anas querquedula*	1 - 7	100 - 200	390 - 590	0 - 30
Gadwall	*Anas strepera*	12 - 21	50 - 80	60 - 96	0 - 240
Common Redshank	*Tringa totanus*	3 - 8	35 - 70	280 - 610	0
Marsh Harriers	*Circus aeruginosus*	7 - 16	1,000 - 1,500	93 - 140	0
Tawny Pipit	*Anthus campestris*	4 - 6	200 - 250	1,000 - 1,900	0
White-tailed Eagle	*Haliaeetus albicilla*	1 - 4	10 - 14	5 – 6.6	40 - 80
Smew	*Mergellus albellus*	0	0	8.1 - 17	100 - 700
Common Tern	*Sterna hirundo*	110 - 240	810 - 815	270 - 570	0
Common	*Alcedo atthis*	20 - 45	700 - 1,300	79 - 160	700 - 1,400
Little Egret	*Egretta garzetta*	2 - 5	0 - 30	68 - 94	0

ÚEV Biskupické luhy

The Protected Territory of the European Importance (ÚEV) Biskupické luhy was declared for the purpose of the protection of the following subjects of protection:

Biotope (* designates the priority biotope)

3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition type

6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of Orchideaceae)

91F0 Inundated oak-elm-ash forests alongside lowland rivers

91G0* Carpathians and Pannonian oak-hornbeam forests

91H0* Thermophilic Pannonian oak forests

Species (* designates the priority species)

Bullhead (*Cottus gobio*)
European Fire-bellied Toad (*Bombina bombina*)
Stag Beetle (*Lucanus cervus*)
Great Capricorn Beetle
(*Cerambyx cerdo*) Kessler's
Gudgeon (*Gobio kessleri*)
Danube Ruffe (*Gymnocephalus baloni*)
European Beaver (*Castor fiber*)
Mehelyi's Root Vole* (*Microtus oeconomus mehelyi*)

CHVÚ Sysľovské polia

Table 2: In the Protected Avian Territory (CHVÚ), the following bird species are the subject of protection:

Slovak name	Latin name	Supposed count of nesting pairs[3]			Count of individuals wintering the	Count of individuals wintering the
		in the	in SR	in the EU		
Great Bustard	*Otis tarda*	3-5	10	31 - 36	100	150 - 200
Greater White-fronted Goose	*Anser anbifrons*	(	0	62 - 72	1,500	3,700 – 4,600
Taiga Bean Goose	*Anser fabalis*	(	0	140	2,500	2,500
Red-footed Falcon	*Falco vespertinus*	5 - 20	5 - 20	26 - 39	0	0

ÚEV Ostrovné lúčky

The Protected Territory of the European Importance (ÚEV) Ostrovné lúčky was declared for the purpose of the protection of the following subjects of protection: Biotopes (* designates the priority biotope)

91E0* Inundated willow-poplar and alder forests

3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of *Magnopotamion* or *Hydrocharition type*

6210 Xerophilous grass and herb bushy stands on lime subsoil (*important sites of *Orchideaceae*)

91F0 Inundated oak-elm-ash forests alongside lowland rivers

Species

Flat Bark Beetle *(Cucujus cinaberinus)*
Yellow-Spotted Whiteface *(Leucorrhinia pectoralis)*
Stag Beetle (*Lucanus cervus*)
Great Capricorn Beetle (*Cerambyx cerdo*)
Kessler's Gudgeon (*Gobio kessleri*)
Whitefin Gudgeon *(Gobio albipinnatus)*
Bullhead *(Cottus gobio)*
Danube Ruffe *(Gymnocephalus baloni)*
Streber *(Zingel streber)*
Amur Bitterling *(Rhodeus sericeus amarus)*
European Fire-bellied Toad *(Bombina bombina)*
Danube Newt *(Triturus dobrogicus)*
Greater Mouse-eared Bat *(Myotis myotis)*
European Beaver (*Castor fiber*)

[3] http://natura2000.eea.europa.eu (quoted on 17.3.2014) – data of 10/2012,

CHVÚ Lesser Carpathians

Table 3: In the Protected Avian Territory (CHVÚ), the following bird species are the subject of protection:

Slovak name	Latin name	Supposed count of nesting pairs[4]			Count of individuals wintering in the SR
		in the CHVÚ[5]	in the SR	in the EU (thou.)	
Saker Falcon	*Falco cherug*	4	19 - 45	360 - 540	10 - 25
European Honey-buzzard	*Pernis apivorus*	40	900 - 1,300	110 - 160	0
Middle Spotted Woodpecker	*Dendrocopos medius*	300	2,500 - 4,000	140 - 310	4,000 – 10,000
White-backed Woodpecker	*Dendrocopos leucotos*	60	1,500 - 2,500	180 - 550	3,000 - 6,000
Syrian Woodpecker	*Dendrocopos syriacus*	50	1,500 - 2,500	530 - 1,100	2,500 - 5,000
Black Woodpecker	*Dryocopus martius*	60	1,500 - 2,500	740 - 1,400	4,500 - 6,500
Eurasian Eagle-owl	*Bubo bubo*	13	300 - 400	19 - 38	700 - 1,000
Black Stork	*Ciconia nigra*	6	400 - 600	7.8 - 12	0 - 2
European Nightjar	*Caprimulgus europaeus*	15	1,000 - 2,000	470 - 1,000	0
Peregrine Falcon	*Falco peregrinus*	3	120 - 150	12 - 25	5 - 10
Collared Flycatcher	*Ficedula albicollis*	3,900	70,000 - 150,000	1,400 - 2,400	0
Red-breasted Flycatcher	*Ficedula parva*	500	5,000 – 10,000	1,200 - 10,000	0
Red-backed Shrike	*Lanius collurio*	1,400	65,000 - 130,000	6,300 - 13,000	0
Grey-headed	*Picus canus*	100	1,500 - 2,000	180 - 320	3,500 - 6,000
Barred Warbler	*Sylvia nisoria*	250	3,000 - 6,000	460 - 1,000	0
Common Quail	*Coturnix coturnix*	50	2,000 - 6,000	730 - 2,400	0
Eurasian Wryneck	*Jynx torquilla*	400	2,500 - 4,000	580 - 1,300	0
Spotted Flycatcher	*Muscicapa striata*	1,000	65,000 - 150,000	6,000 - 19,000	0
Common Redstart	*Phoenicurus phoenicurus*	600	10,000- 15,000	6,800 - 16,000	0
Common Stonechat	*Caxicola torquata*	1,000	30,000- 50,000	2,000 - 4,600	0
European Turtle Dove	*Streptopelia turtur*	600	15,000 - 30,000	3,500 - 7,200	0
Eastern Imperial	*Aquila heliaca*	3	35 - 40	850 - 1,400	20 - 50

[4] http://atlas.vtaky.sk, Kopecká (2011), http://natura2000.eea.europa.eu, Reporting Article 12 in 1.1, Database, quotted on 4.2.2014. Available at: https://www.sopsr.sk/reporting/2012/

[5] data of 2005

ÚEV Bratislavské luhy

The Protected Territory of the European Importance (ÚEV) Bratislavské luhy was declared for the purpose of the protection of the following subjects of protection:

Biotopes (* designates the priority biotope)

91E0* Inundated willow-poplar and alder forests

3150 Natural eutrophic and mesotrophic dead waters with the vegetation of floating and/or immersed vascular plants of *Magnopotamion* or *Hydrocharition type*

3260 Lowland to montane water courses with the vegetation of *Ranunculion fluitantis* and *Callitricho- Batrachion* association

91F0 Inundated oak-elm-ash forests alongside lowland rivers

Species:

Flat Bark Beetle *(Cucujus cinnaberinus)*
Bullhead *(Cottus gobio)*
European Fire-bellied Toad *(Bombina bombina)*
Eriogaster *(Eriogaster catax)*
Stag Beetle *(Lucanus cervus)*
Large Copper *(Lycaena dispar)*
Barbastelle *(Barbastella barbastellus)*
Greater Mouse-eared Bat *(Myotis myotis)*
Pond Bat *(Myotis dasycneme)*
Amur Bitterling *(Rhodeus sericeus amarus)*
Scarce Large Blue *(Maculinea teleius)*
Thick Shelled River Mussel *(Unio crassus)*
Streber *(Zingel streber)*
Kessler's Gudgeon *(Gobio kessleri)*
Hungarian Quaker *(Dioszeghyana schmidtii)*
Fenton's Wood White *(Leptidea morsei)*
Yellow-spotted Whiteface *(Leucorrhinia pectoralis)*
Danube Ruffe *(Gymnocephalus baloni)*
White-finned Gudgeon *(Gobio albipinnatus)*
Danube Newt *(Triturus dobrogicus)*
Marsh Fritillary *(Euphydryas aurinia)*
Water Beetle *(Graphoderus bilineatus)*
Golden Spined Loach *(Sabanejewia aurata)*
Eurasian Beaver *(Castor fiber)*

III.3. Objectives of the protection of the locations and the most important elements contributing to the location integrity

CHVÚ Dunajské luhy

- **The assurance of a favourable p condition of the biotopes of bird species of the European importance and the biotopes of migrating bird species of** Black Stork, Sand Martin, Little Bittern, Mediterranean Gull, Black Kite, Common Goldeneye, Red-crested Pochard, Common Pochard, Tufted Duck, Garganey, Gadwall, Common Redshank, Western Marsh Harrier,Tawny Pipit, White-tailed Eagle, Smew, Common Tern, Common Kingfisher, Little Egret and the assurance of the conditions for their survival and reproduction.
- **The assurance of a favourable condition of the biotopes and the assurance of conditions for survival and reproduction of migrating water birds, the birds creating groups during migration or wintering.** This considers mainly the following species: Common Sandpiper, Eaton's Pintail, Northern Shoveler, Garganey, Eurasian Wigeon, Mallard, Gadwall, Greater White-fronted Goose, Greylag Goose, Taiga Bean Goose, Grey Heron, Common Pochard, Tufted Duck, Greater Scaup, Ferruginous Pochard, Common Goldeneye, Whooper Swan, Mute Swan, Eastern Great Egret, Common Coot Common Snipe, Tasmanian Native-hen, Arctic Loon, Red-throated Loon, Armenian Gull, Mew Gull, Black-headed Gull, Great Snipe, Velvet Scoter, Common Scoter, Smew, Common Merganser, Red-breasted Merganser, Red-crested Pochard, Great Cormorant, Great Crested Grebe, Red-necked Grebe, Black-necked Grebe, Water Rail, Tricolored Grebe and Green Sandpiper.

The territory is represented by the main course of the Danube and its left bank with inundated forests. The sufficient amount of natural water biotopes (water courses, swamps) as well as artificial water reservoirs provides good preconditions for nesting of Little Egret (*Egretta garzetta*), Little Bittern (*Ixobrychus minutus*), Common Tern (*Sterna hirundo*), Garganey (*Anas querquedula*), Common Redshank (*Tringa totanus*). The presence of forest biotopes, especially long-stemmed stands with the occurrence of nesting places of White-tailed Eagle (*Haliaeetus albicilla*), Black Stork *(Ciconia nigra)* and Black Kite (*Milvus migrans*) increases the value of the protected avian territory even more.

ÚEV Biskupické luhy

- **Protection of biotopes of the European importance**: Thermophilic Pannonian oak forests (91H0), the Carpathian Pannonian oak and hornbeam forests (91G0), the Inundated oak-hornbeam and ash forests alongside lowland rivers (91F0) and the species of the European importance: Great Capricorn Beetle (Cerambyx cerdo), Stag Beetle (Lucanus cervus), Dioszeghyana schmidtii, Bullhead (Cottus gobio), Danube Ruffe (Gymnocephalus baloni), Kessler's Gudgeon (Gobio kessleri), European fire-bellied Toad (Bombina bombina) and Eurasian Beaver (Castor fiber).

In addition to the typical inundated forests, the subject of protection are also the Carpathian and Pannonian oak and hornbeam forests, thermophilic Pannonian oak forests, natural eutrophic and mesotrophic dead waters, xerothermic grass and herbaceous as well as shrubby stands on calcareous subsoil. The contrast of very wet and very dry biotopes on rather small area is the precondition for a huge variety of species of plants and animals with the occurrence of many rare and endangered species.

CHVÚ Sysľovské polia

- **the conservation of biotopes of the birds of the European importance and the biotopes of migrating birds-** Great Bustard, Greater White-fronted Goose, Taiga Bean Goose, Red-footed Falcon and **the assurance of the conditions for their survival and reproduction**

The territory represents the Pannonian type of lowland represented mainly by agrocoenoses and scarce belts of windbreaks and shrubs, mostly secondary xerothermic to semixerothermic grassy and herbaceous communities rich in species on loess and alluvia of the Danube river. The tufty grass species and the closed vegetation cover determine the appearance of the biotope resembling the grass communities on fallow land. The prevailing part of the territory is however agriculturally intensively utilised – the target crops are mainly the cultures of cereals, the growth of Alfalfa, sunflower and rape kale. The windbreak belts and shrubs are formed in particular by Black Locust, Tree of Heaven, Field Maple, Wild Pear tree and Elder.

ÚEV Ostrovné lúčky

- **Protection of biotopes of the European importance**: Inundated oak-elm and ash forests alongside the lowland rivers (91F0), inundated willow-poplar and alder forests (91E0), Xerophilic grassy and herbaceous and shrubby growths on calcareous underbed (6210), Natural eutrophic and mesotrophic still waters with vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition (3150) type and the species of the European importance: Great Capricorn Beetle (Cerambyx cerdo), Red Flat Bark Beetle (Cucujus cinnaberinus), Stag Beetle (Lucanus cervus), Dragonfly (Leucorrhinia pectoralis), Bullhead (Cottus gobio), Streber (Zingel streber), Danube Ruffe (Gymnocephalus baloni), Gobiid Fish (Proterorhinus marmoratus), Amur Bitterling (Rhodeus sericeus amarus), Kessler's Gudgeon (Gobio kessleri), White-finned Gudgeon (Gobio albipinnatus), European Fire-bellied Toad (Bombina bombina), Danube Newt (Triturus dobrogicus), European Beaver (Castor fiber) and Greater Mouse-eared Bat (Myotis myotis).

The territory of the European importance Ostrovné lúčky includes the preserved fragments of the originally vast inundated forests alongside the Danube River, located at its right bank in the proximity of Rusovce and Čunovo. The biotopes of softwood and hardwood inundated forest, still water and river branches rotate here on a rather small area - in a sharp contrast with very rare xerophilous grassy communities. Such dry places are located on the places with massive gravel alluvia reaching high above the level of ground water.

CHVÚ Lesser Carpathians

- **The preservation of the biotopes of the bird species of the European importance and the biotopes of migrating bird species:** Saker Falcon, European Honey-buzzard, Middle Spotted Woodpecker, Eurasian Eagle-Owl, Eurasian Nightjar, Black Stork, White-backed Woodpecker, Syrian Woodpecker, Black Woodpecker, Peregrine Falcon, Collared Flycatcher, Red-breasted Flycatcher, Red-backed Shrike, Grey-faced Woodpecker, Barred Warbler, Common Quail, Eurasian Wryneck, Spotted Flycatcher, Common Redstart, European Stonechat, European Turtle-Dove and Eastern Imperial Eagle and **the assurance of their survival and reproduction.**

In the CHVÚ Malé Karpaty, mainly the forest biotopes within the 1st vegetation (oak) to 4th vegetation level (beech) are abundant.

The grassy and herbaceous growth as well as shrubby communities take not so large areas in the marginal parts of the territory and in the valleys of forest complexes. Also the parts of vineyards mainly at the foot of the East slopes of Pezinok Carpathians were included in the CHVÚ. A special biotope of birds is represented by numerous rock formations with rock walls in the mountain range of Pezinok Carpathians.

ÚEV Bratislavské luhy

- **Protection of biotopes of the European importance**: Inundated oak-elm and ash forests alongside the lowland rivers (91F0), inundated willow-poplar and alder forests (91E0), Lowland to montane water courses with the vegetation of the alliance of *Ranunculion fluitantis* and *Callitricho-Batrachion* (3260), Natural eutrophic and mesotrophic still waters with vegetation of floating and/or immersed vascular plants of Magnopotamion or Hydrocharition (3150) type and the species of the European importance:

  Creeping Marshwort *(Apium repens),* Scarce Large Blue *(Maculinea teleius),* Large Copper *(Lycaena dispar),* Diving Beetle *(Graphoderus bilineatus),* Marsh Fritillary *(Euphydryas aurinia),* Eastern Eggar *(Eriogaster catax),* False Ringlet *(Coenonympha oedippus),* Ground Beetle *(Carabus variolosus),* Violet Click Beetle *(Limoniscus violaceus),* Stag Beetle *(Lucanus cervus),* Compton Tortoiseshell *(Nymphalis vaualbum),* Fenton's Wood White *(Leptidea morsei),* Dragonfly *(Leucorrhinia pectoralis), Dioszeghyana schmidtii, Bolbelasmus unicornis,* Bullhead *(Cottus gobio),* Streber *(Zingel streber),* Balon's Ruffe *(Gymnocephalus baloni),* Tubenose Goby*(Proterorhinus marmoratus),* Golden Loach *(Sabanejewia aurata),* Amur Bitterling *(Rhodeus sericeus amarus),* Kessler's Gudgeon *(Gobio kessleri),* White-finned Gudgeon *(Gobio albipinnatus),* Danube Newt *(Triturus dobrogicus),* European Fire-bellied Toad *(Bombina bombina),* Lesser Horseshoe Bat *(Rhinolophus hipposideros),* Greater Mouse-eared Bat *(Myotis myotis),* Pond Bat *(Myotis dasycneme),* European Beaver *(Castor fiber)* and Barbastelle Bat *(Barbastella barbastellus).*

The territory is covered with valued stands of willow-poplar and oak-elm and ash inundated forests with the occurrence of many old trees of a unique ecological value. Forest management took place here only to a limited extent. In addition to the inundated forests, we can find there also the remnants of forest steppes or important plant communities of dead water and water courses.

III.4. Biotopes of European importance and species of European importance, including birds and their biotopes that are the subject of protection and priority biotopes of European importance that shall be negatively affected

(for example their representative character or the situation in their protection pursuant to Article 65 Para 1 Letter o) of the Act, the degree of isolation and their roles and functions within the given location)

The given subjects of protection with proven significantly negative impact within the reasonable assessment pursuant to the stipulations of Article 6 (3) and 6 (4) of the Council Directive No. 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. Namely **Black Kite (*Milvus migrans*)**, **White-tailed Eagle (*Heliaeetus albicilla*)** and **Black Stork (*Ciconia nigra*)**, that are the subject of protection in the CHVÚ Dunajské luhy (SKCHVU007).

Black Kite *(Milvus migrans)*

It lives in Slovakia in particular in hilly areas, wide valleys between mountain ranges, as well as inundated forests and lower mountain ranges. It loves forest landscape interwoven with free areas (fields, hayfields), almost always in the proximity of water, large rivers or water reservoirs.

The European Black Kites are flighty to migrating. The can seldom winter in the proximity of

their nesting place, or fly just to South Europe. However, in majority of cases they winter in South Africa. The notable migrating destinations are Gibraltar and the Near East. Just little portion of birds migrate through Italy. They fly away to their wintering places soon, usually in second half of August, they return in first half of April.

It nests in Slovakia and the entire Europe individually, extraordinary semi-colonially. It often nests in the colonies of other birds – Grey Herons, White Storks- or in their proximity Pairs are maybe permanent and both birds arrive to their nesting places together. After arrival, they show their wedding flights. Their part is catching with claws while flying high in the air and subsequent falling together almost to the earth, while rotating around. They build their nests on trees. They often use the old nests of other birds - Herons, Cormorants, Crows, Storks, etc. In addition to vegetable material, pieces of paper, cloths, plastic, cords, etc. often occur in the nest lining. They start laying eggs at the end of April, beginning of May. Their number is 2-3 and they are laid in the interval of 2-3 days. Incubations starts prior to laying the last egg. Both parents participate in hatching, female more. Egg heating takes 28-32 days. Male fetches food to the female while hatching. The weakest baby bird is often suppressed by the older ones and it sometimes dies. They stay in nests for 42-46 days. They leave the nests in July in our place. They reach gonad maturation stage at the age of at least 2 years. They can stay with parents in the nesting territory even for another year, while not being scared away.

Black Kite feeds on various food. Fish prevail in their food in the proximity of water. Mammals may prevail elsewhere, in particular rodents or birds. It hunts or amphibians, in particular frogs and reptiles not so much. Insect may form a large portion. It is known it often steals food from other bird species, in particular the birds of prey. It often collects animals struck by cars on the roads. While living in cities or their proximity, it feeds mostly on waste. It often eats carcases. They can collect food from water level also while flying.

The considered area uses the part of its nesting population of Slovakia that inter alia uses also the inundated forests of the Morava river and Latorica river, the Borsá nížina Lowland, the Podunjská nížina lowland and the Východoslovenská rovina Flatland. The feeding territory may be rather large, according to the local conditions, even 5 or more kilometres away from their nest. The abundance of nesting population within the entire Slovak Republic was assessed in 1999 to the 40 to 60 pairs, the log-term population trend shows its significant decrease.

In past (1970 - 1980), several pairs nested the part of the Protected Avian Territory affected by the construction of highway D4 annually, their number decreased in the 1990s, yet nesting was still regular (1 - 3 pairs). Nowadays, it nests only irregularly, however it occurs every year. The decrease in the number of nesting pairs was very significant in our entire section of the Danube river (e.g. just 2 pairs in the entire CHVÚ in 2009 and no pair in the entire CHVÚ in 2011) or in the entire Slovakia and Black Kite belongs to our the most endangered bird species.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - unfavourable (U2).

The role and function within the given location – predator.

White-tailed Eagle (Haliaeetus albicilla)

It lives in the proximity of large rivers and water reservoirs, with a sufficient amount of fish and water fowl.
There must be old forests with large trees nearby.

Adult birds from the Central European area are mostly regular and they spend winter in the proximity of the nesting place. Young birds are unsettled to migrating and they winter in Western or Southern Europe. Nordic birds are migrating and they may winter in our place.

The pairs of White-tailed Eagle are stable for many years and they mostly disintegrate only after the death of any of the partners. It nests rather soon, the engagement flights and nest construction start at the end of December already. The part of their wedding flights is mutual catching in the air using their claws, accompanied with noisy crying. It nests in high massive trees, the most frequently on poplars, beeches and pines. There must be a good landing space for nest location. It is sensitive to disrupting during nesting. Its nest very large. In majority of cases, the pair has several nests in the territory, it uses them in rotation. Female lays 1-3 eggs in the second half of February already, or at the beginning of March. Incubation takes 36-40 days. Mostly female hatches, being altered by male for a short time. The nesting care takes 80-90 days. At least two months after leaving their nest, the young birds are fully nutritionally dependant upon parents that feed them. They reach gonad maturation stage approximately at the age of 5.
The composition of food of White-tailed Eagle is variegated. The greatest portion of its food is fish, followed by small to medium-sized mammals and various bird species. It often eats also carcasses, in particular in winter.

White-tailed Eagle nested on the Slovak side of the Danube river till the mid of the 1960s. Its extinction in Slovakia after this period relates to the overall decrease in the European population in the 1960s and 1970s as the consequence of excessive chemisation of environment, as well as the consequence of a direct chase by a man - shooting, egg collection, trapping, falconry. Since the 1980s, the population starts growing and White-tailed Eagles appeared also in our place most frequently, in particular in winter period. First two pairs nested on our territory after more than 30 years in 1998.

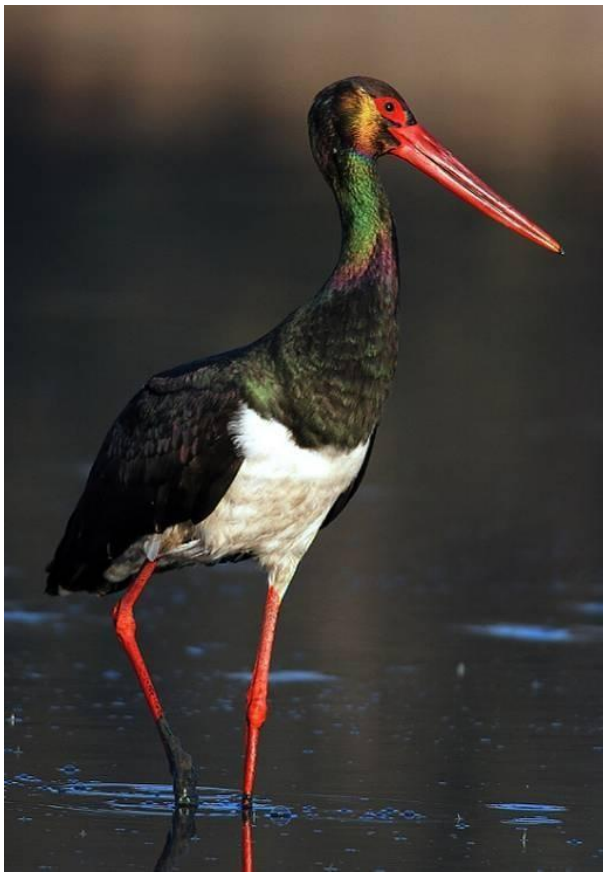
In addition to the Danube, it nests near the Morava river and Zemplínska Šírava reservoir, near the Latorica river, on trees in all cases, at the amount of ca 6 pairs. The stable wintering place of White-tailed Eagle is the territory in the section of the Danube river and the Morava river in the areas bordering with Hungary, Austria and the Czech Republic. It winters on the Váh River, the Hron River and other water courses that do not freeze in winter. The abundance of wintering population is substantially higher than the nesting population, they assess ca 60 - 80 individuals winter in our place.

The contemporary population of White-tailed Eagle in the CHVÚ Dunajské luhy are 4 pairs (2006-2011). This is the biggest nesting place of the species in Slovakia and the majority of the Slovak population of White-tailed Eagle nests here. 2009). Contemporary (2009-2011) one pair nests in the territory directly affected by the construction of the highway D4.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).

The role and function within the given location – predator.

Black Stork (Ciconia nigra)



A migrating species, it arrives in March to April, leaves in August or even in September. It rests in forests, both inundated and deciduous, mixed or evergreen, from lowlands up to the altitude of ca 1,000 m a.s.l.. The reproduction period is from April till August.

Black stork nests in solitude. The nest made of branches and twigs is hidden in the crowns of high trees, in particular deciduous or they are built on inaccessible rocks. They occupy also the old nests left by large birds of prey. It has several nests in its territory, it alters them within the years. The nest is usually on the top of a dry tree, however it may nest also in the central part of a crown near the stem, if there is sufficient space for arrivals and departures from side. A shallow nest is made of thick and dry branches placed in several layers. It is usually really big, since Black Storks return to the same place every year and they constantly repair their nest and add something to it. They are reinforced with Greensward and Couch-grass in the central part. The upper part is made of thinner branches and laid out with moss, dry grass,

sometimes leaves and hair.

You can sometimes find also paper, clothes or potato tops in the valley of the nest. It differs from the nests of large birds by the layers of the given materials.

It catches fish up to 25 cm size, in addition to them also water insects, frogs and newts. In the areas with wet meadows, it feeds mainly on grasshoppers, in addition to it also on frogs, rodents and baby birds. It gets food from places up to the distance of 10 km from its nest. Fluffs, so called pellets, are formed from the indigestible parts of the food of Storks, the vomit them similarly as owls and birds of prey.

Nowadays, approximately 400 to 600 pairs of the species live in Slovakia. The most important negative impacts on this species can be considered to be, similarly as in the case of the previous species, the exploitation not only of inundated forests and their surrounding, caused by forest management, the exploitation of the country for sports and recreation purposes.

as for the entire Slovakia, Black Stork occurs in summer on the entire territory, save the North and West part of the Podunajská nížina Lowland.

In not so far past, 1 pair nested in the part of the CHVÚ affected by the construction of highway D4 till 1995.

Nowadays, the nesting population in the entire CHVÚ is at historical minimum, the nesting of just one pair was observed in 2009.

Despite that, Black Stork occurs in the CHVÚ every years, including the area affected by the proposed activity.

The assessment of the condition of the species from the point of view of protection pursuant to Article 12 of the directive 2009/147/EC - favourable (FV).

The role and function within the given location –
predator.

III.5. Social value of biotopes and species negatively affected by the plan/project

Three bird species (see table above) shall be significantly negatively affected by the construction and operation of the highway D4 Bratislava, Jarovce – Ivanka North. Their social value is specified in the Regulation No. 158/2014 Coll. amending and supplementing the Regulation of the Ministry of Environment of the Slovak Republic No. 24/2003 Coll. implementing the Act No. 543/2002 Coll. on the protection of nature and landscape as amended.

Table 4: *Social value of the significantly negatively affected*

Negatively affected species	Social value of an individual
Black Kite *(Milvus migrans)*	4,610.00 €
White-tailed Eagle (Haliaeetus albicilla)	5,990.00 €
Black Stork *(Ciconia nigra)*	3,220.00 €

III.6. Importance of the location for biotopes and species pursuant to Clause 4 that shall be affected

(for example, the role of the locations within the Slovak Republic, the biogeographic region and the territories of the system of protected territories should be stated)

Highway D4 Bratislava, Jarovce - Ivanka North passes through the CHVÚ in its North part, in particular the upper part of Hrušovská zdrž Dam, where the entire inundation part is not permanently flooded. Permanently increased level in this part is just in the main bed of the Danube and its branches. There are the softwood and hardwood inundated forest stands or

lowland mown meadows in the flooded part.

The compact part of the forest stands of inundated forest at the left bank of the Danube River in the wider surroundings of the intention of the highway is relatively little attacked by human activities. Thanks to its area and species composition, the forest units are a suitable refuge (in particular the **nesting biotope**) for timid bird species (**Black Stork, Black Kite, White-tailed Eagle**), that are the subject of protection in the CHVÚ Dunajské luhy.

Black Stork *(Ciconia nigra)*

It lives in the forests within the CHVÚ, it uses them for nesting. It searches for food at the edges of water areas or water courses, covered with vegetation, if possible. It catches fish up to 25 cm size, in addition to them also water insects, frogs and newts.

In the parts of the CHVÚ with wet meadows, it catches also grasshoppers, in addition to it also frogs, rodents or baby birds. It gets food from places up to the distance of 10 km from its nest. It searches for peaceful and hidden places, it avoids the human settlements. It nests individually on trees.

Black Kite *(Milvus migrans)*

The compact inundated forest stand in the considered territory is very suitable for its occurrence and nesting. The feeding territory may be rather large, according to the local conditions, even 5 or more kilometres away from their nest.

From this point of view, the considered territory still remains the significant location of the species and we may suppose that when the Danube population starts growing again, it would occupy the former territories in the concerned area.

White-tailed Eagle (*Haliaeethus albicilla*)

The proximity of a large river and water reservoirs with a sufficient amount of fish and water birds in the concerned territory make its feeding base. The existence of old forests with large trees is suitable for its nesting.

Furthermore, the territory around the Danube river is the permanent wintering place.

With regards to the above and to the fact that there are 4 pairs of White-tailed Eagle nesting in the CHVÚ Dunajské luhy (this is the greatest nesting place of the species in Slovakia), the concerned territory is of a large importance with the species.

III.7. Description of expected negative effects, description of their scope, importance, size and their location

The description of the expected negative impacts (loss, damage, disturbance, direct and indirect impacts, etc.), the description of their scope (the area of the biotopes and the number of species or the areas of occurrence affected by the project), the importance and size (for example the affected area or population in relation to the overall area and population on the given location or in the entire landscape) and their location (including maps).

The process of the assessment of impacts of environment showed the construction shall have a significant negative impact on the subjects of the protection of the CHVÚ Dunajské luhy, namely the bird species: **Black Kite (*Milvus migrans*), White-tailed Eagle (*Haliaeetus albicilla*) and Black Stork (*Ciconia nigra*),** in the period of implementation and operation. The subjects of protection shall be affected in particular by the following impacts: seizure (the direct intervention in the biotopes), noise and light disturbance, increased visit rate at the left-side cycling route in the inundated forests (disturbance), contacts with vehicles and the pollution of environment (the changes in immission characteristics, the pollution of aqueous environment).

Seizure

Seizure represents a direct interference with the biotopes. The structure passes through the protected avian territory in its Northern part, in particular the upper part of Hrušovská zdrž.

The approximate seizure is 11.13 ha, which is 0.067% of the overall area of the CHVÚ.

In total, there are the biotopes suitable for occurrence or nesting of some species being the subject of protection in the entire area. The majority of the subjects of protection uses the territory as *feeding territories or gathering places* (migrating and wintering species).

According to the ornithological survey (Kúdela et al., 2011), in the place of the intention of the construction, probably 1 pair of Black Stork regularly nested till 1995, nowadays the nesting population is on its minimum (1 nesting pair in the CHVÚ), however it probably comes to the increase in population recently.

In such a case it would probably came to the re-settlement of the area.
The nesting places of the species are rather rare and therefore they require a strict protection.

In past, the part of the CHVÚ in the proximity of the intention was a regular nesting place of Black Kite species. Nowadays, it nests only irregularly, however it occurs every year. Since the decrease in the species took place in the entire territory of the Slovak Republic, from the national point of view, the territory still remains the significant location of the species and we may suppose that as long as the Danube population starts again raising, the birds shall occupy the former territories in the area affected by the construction (Kúdela, Melišková, Littera, 2011).

The contemporary nesting population of White-tailed Eagle in the CHVÚ is č pairs (2006 - 2011). It is the greatest nesting place of the species in Slovakia. One pair nests in the territory directly affected by the construction of the intention, which is 1/4 of the overall population in the CHVÚ.

The above data imply the nesting places of the species are very rare and therefore they require a strict protection. The liquidation of the biotopes in the area of the intention would therefore be assessed as significantly negative for the species (even despite the relatively small percentage of seizure within the CHVÚ).

Noise and Light Disturbance

According to Rejnen et al. (1995), noise level at which animals leave their habitates due to the excessive disturbing is different for various bird species, however average ranges from 40 to 50 dB, for forest bird species as well as for the birds living in the open sites. Therefore the values are considered as relevant (for the determination of significantly affected territory).

As long as we count the area significantly affected by the increase in noise during the operation of the intention, we shall get the number 336.9 ha (night), or 276.6 ha (day), which makes 2.04 % (night), or 1,68 % (day) of the overall area of the CHVÚ. The percentage applies to the species: Black Kite and White-tailed Eagle that use all the affected biotopes (e.g. nesting places, feeding biotopes), thus the forest biotopes in Biskupické luhy and water areas and inundation of the Danube River.

In the case of species using mainly the forest stands of Biskupické luhy, the significant extent of disturbance shall affect ca 143.9 ha, i.e. approximately 1.7% of the type of environment within the CHVÚ. This regards mainly Black Stork.

From the numbers stated above we may draw a conclusion speaking that due to the noise and light disturbance in particular from the operation of the intention, the named three bird species shall be significantly negatively affected.

Increased Visit Rate in the Location

The part of the intention is the interconnection of the left-bank and right-ban cycling route using the bridges on D4, from which the lane for pedestrians and cyclists shall be separated. Therefore there are some concerns that the visit rate of the left bank shall significantly grow (nowadays it is accessible only with difficulties), which would bring about the disturbance not only in the littoral part, but also in the area of inundated forests offering the hiding place to the species sensitive to disturbance, such as Black Stork, White-tailed Eagle and Black Kite. With the impact of the increased visit rate in the considered location, there is a risk the sensitive species would be pushed out from the biotopes occupied by them till now.

The increased visit rate and related increase in the disturbance by tourists may be expected in the proximity of the existing (the cycling route at the left- bank dam alongside the left-side ingress channel) or newly built cycling routes on the left bank of the Danube River (the cycling route in parallel with the highway D4), which may increase the force acting on the sensitive bird species.

The increased visit rate in the location of Biskupické luhy shall not contribute to the improvement of ecological conditions for sensitive bird species, it is surely perceived as negative, however it is impossible to classify it as significantly negative impact.

The other impacts that shall be demonstrated in particular in the period of operation area **the collisions with vehicles and environment pollution.**
The impacts were assessed as moderately negative.

III.8. Possible cumulative impacts and other impacts that could occur as the result of combined measures of the assessed plan/project and other plans/projects

The current urban plan of a large territorial unit of Bratislava region, the urban plan of the capital city of the Slovak Republic, Bratislava and also the information system of SEA/EIA were used for the assessment of the cumulative impacts in particular.

The assessed intention is located in the wider surroundings of the capital city of Bratislava that is exposed to rather strong pressures on the exploitation of the territory.

From amongst the existing structures that significantly participate in the cumulative impacts, this regards the following: Highway D1 Bratislava – Trnava, 6-lane – the contemporary highway shall intersect with highway D4 in Ivanka North intersection.

Highway D2 – route: state boundary between CZ/SK (Lanžhot – Brodské) – Malacky – Bratislava – state border between SK/HU (Čunovo – Rajka), 4-lane. The contemporary highway D2 shall intersect with the assessed section of highway D4 in grade separated intersection BA Jarovce.

Highway D4, state boundary between AT/SK (Jarovce) – Bratislava, Jarovce (intersection with D2), 4-lane
– the section assessed here represent the elongation of D4 in the grade separated intersection of Jarovce. The following is stated as the public utility structures in the binding part of the Upper-tier Territorial Unit of Bratislava region. Highway D4, Ivanka North – Rača – the structure following the assessed section of the highway D4.
They shall form the bypass of Bratislava together with the other sections of highway D4.

Expressway R1, Most pri Bratislave – Vlčkovce – the structure following the section of highway D4 assessed here in Podunajské Biskupice intersection This section runs in parallel (ca 10 km) to the South-east with the existing highway D1 in the direction to Trnava.

Expressway R7 BA Prievoz – BA Ketelec – the structure following the section of highway D4 assessed here in Ketelec intersection The suppose the implementation together with the highway D4 in the section assessed here (106-2019).

Expressway R7, BA Ketelec – Dunajská Lužná - this is the continuation of the expressway from GSI Ketelec in the Eastwards direction R7 continues alongside the Danube River to Dunajská Streda – Nové Zámky – Veľký Krtíš. It shall connect to the planned R2 to Košice near Lučenec.

The route of high-speedway (VRT) within the boundaries of the city of Bratislava from the central cargo station alongside the highway D1 to Čierna voda turn and father alongside the highway D1 towards the Váh River region.

The areas for the construction of a parallel taking-off and landing tract with the existing taking-off and landing tract 13–31 and the area for the completion of the necessary infrastructure of the check-in process at the airport of M. R. Štefánik. The areas are closely adjacent to the proposed intention, they are to the West of them.

The territory and equipment of the Waterworks Wolfsthal. This waterworks should be located ca 11.5 km up the Danube River stream from the territories belonging to Natura 2000 system assessed here.

This would mean the influence of water level in the area under the stage, the influence of biotopes in the territory assessed here may not be excluded.

Oil pipeline and product ducts of Schwechat – Slovnaft. The connection of Slovnaft with Austria. The corridor established in the urban plan of Bratislava runs through the territory of Natura 2000 system (CHVÚ Dunajské luhy and´ ÚEV Biskupické luhy – to the North of Kopáč island).

High-pressure gas line Slovnaft-Petržalka-Einsteinova-Mlynská dolina. The route shall run through the CHVÚ Dunajské luhy and ÚEV Biskupické luhy – to the North of Kopáč Island.

Harbours, landing stages and related structures of transport and technical infrastructure of harbours of waterway transport on the Danube River.

Furthermore, they proposed the development function area in the area of the rowing channel at Jarovce branch and also rather vast development function area to the North-east from GSI Jarovce. The industrial area is located to the North of the existing communication E58 between GSI Jarovce and the state boundary between the Slovak Republic and Austria in the proposal.

The above mentioned numerous list of the planned intention implies the surroundings of the assessed intention is under a notable pressure of the development activities.

This regards mainly the structures of the existing transport infrastructure and industrial activities representing rather dense network in the complicated territory. As long as the structures of infrastructure (see above), development areas for residential zones and industrial areas are added to the existing intention, it is clear it could easily come to the exceeding of the bearable level of environment for keeping the objects of the individual locations of Natura 2000 system in a condition favourable from protection point of view.

In the case of the CHVÚ Dunajské luhy, the capacity of environment has already been exceeded, for the intention assessed here. With regards to the CHVÚ Dunajské luhy and ÚEV Biskupické luhy, the other intentions of line structures are planed too (oil pipeline and product duct of Schwechat – Slovnaft and the high-pressure gas line of Slovnaft-Petržalka-Einsteinova-Mlynská dolina), that shall cut the left-side Danube inundated forests in the North part and they shall represent another loss of valued biotopes.. The planned expressway R7 shall then separate the locations to the East from Kopáč Island (the connection to GSI Ketelec). In addition to the increase in noise disturbance and biotope seizure, it shall bring about also the deterioration of the migration permeability of the territory.

In general, the greatest problem shall be a high spatial fragmentation of the territory and the seizure of valuable biotopes together with a significant increase in noise pollution in the case of some types of structures.

III.9. Mitigating measures within the project

(State how they shall be implemented and how could they avoid the negative impacts on the location or reduce the impacts)

Project preparation phase:

- Red sewage system is designed with a sufficient capacity so that the hazardous substances coming from transport (oil substances, tyre wear, brake wear, etc.) cold be always entrapped.- The administrator of the communication shall regularly check and maintain in fully operable condition the safety elements for water protection.

The measure shall be implemented during the construction and operation (check) and it shall prevent the contamination of surface and ground water in the territory.

- Draining of the bridge structures (the Danube, Little Danube Rivers and other water courses) shall be dealt with by sewer system with routing to sufficiently rated safety element for water protection, such as they are dealt with in the zoning and planning decision documentation

The measure shall be implemented during the construction and operation (check) and it shall prevent the contamination of surface and ground water in the territory.

- As for the bridge structures running through the location of Natura 2000 system, the silent expansion blocks shall be used, they shall reduce the noise in the area under the bridge.

The measure shall reduce the noise load of the surrounding environment to maximum extent, whereby the scope of the concerned locations of Natura 2000 system shall be reduced

 As for the bridge structures running through the locations of Natura 2000 system, 4 m hight anti-noise walls shall be installed at both sides.

The measure shall reduce the noise load of the surrounding environment to maximum extent, whereby the scope of the concerned locations of Natura 2000 system shall be reduced

Implementation phase.

 The observation of the conditions specified in the planning permission shall be regularly checked by the eco-supervisor of the construction.

The measure shall prevent the undesirable impacts outside the seizure of the structure and it shall ensure the meeting of the other proposed mitigating measures.

 The cutting of trees in the structure seizure area shall take place in the period outside bird nesting.

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The measure should prevent the endangerment of the reproduction cycle of bird species till the period of young bird taking out.

 In the proximity of Biskupice branch (ca km 4.590 – 4.720 of the intention), the earth stripping shall take place outside the period of reproduction of Root Vole (in months: XII – I at the best).

The measure shall prevent the disturbance of the reproduction cycle of the individuals of the protected species.

 It shall be necessary to immediately level the terrain depressions in which water could stay during the construction, since they would become the biotope for the reproduction of amphibians. If necessary, the migration barriers shall be installed during the construction for the protection of amphibians.

The measure should prevent the death loss of amphibians directly on the site.

 The equipment of the construction mechanisation shall be complemented by emergency pack comprising a sorbent.

The biodegradable (degradable in nature) service fluids shall be used to a maximum possible extent, the mechanisation working on the structure must be maintained in a suitable technical condition (no dropping).

The measure should prevent the pollution of soil and ground water and thus also the indirect impact on the surrounding biotopes.

 the construction yards and material dump sites shall be located outside the location of Natura 2000 system.

Thus the possible risks of contamination of the territory directly within the territories of Natura 2000 shall be avoided.

Operation phase:

 Through the representatives of the ŠOP SR, the relevant self-governments and SVP, š.p. it is necessary to prevent the location of new stands with refreshment alongside the entire left-bank cycling route in the area of CHVÚ Dunajské luhy.

The objective of the measure is to minimise the disturbance of birds by tourists and sportsmen in the concerned protected territories.

 The construction shall not disturb the existing system of bars and barriers preventing the unauthorized drive into the area of CHVÚ Dunajské luhy at both sides of the Danube River

The role of the measure is to minimise the disturbance by an increased visit rate in the CHVÚ Dunajské luhy.

- The space under the flyover bridge shall be left as much as possible in a natural condition (clay subsoil with rocks in enclaves with fractions up to 30 cm that shall increase the variability of environment) while respecting the needs and requirements of the bridge body maintenance.

The measure shall improve the migration permeability of the territory under the future flyover bridge, in particular for reptiles and small animals.

- The regular inspections and disposal activities shall prevent the expansion of invasive plant species into the areas with removed vegetation cover during the construction.

The measure should prevent the expansion of invasive plants, so that the biotopes in the proximity of the intention would not be devalued after the return to close-to-nature condition.

IV. ALTERNATIVE SOLUTIONS

IV.1. Identification and description of possible alternative solutions including zero alternative

(method of identification, procedures, methods)

The location of the given section of highway D4 was the subject of several studies dealing with its location to the South and South-east from the capital city of Bratislava. These were the following studies:

- ***"Transport and urban study of zero circuit around Bratislava", hereinafter referred to as the*** DUŠ (elaborated by DOPRAVOPROJEKT, a.s. in 02.2002).

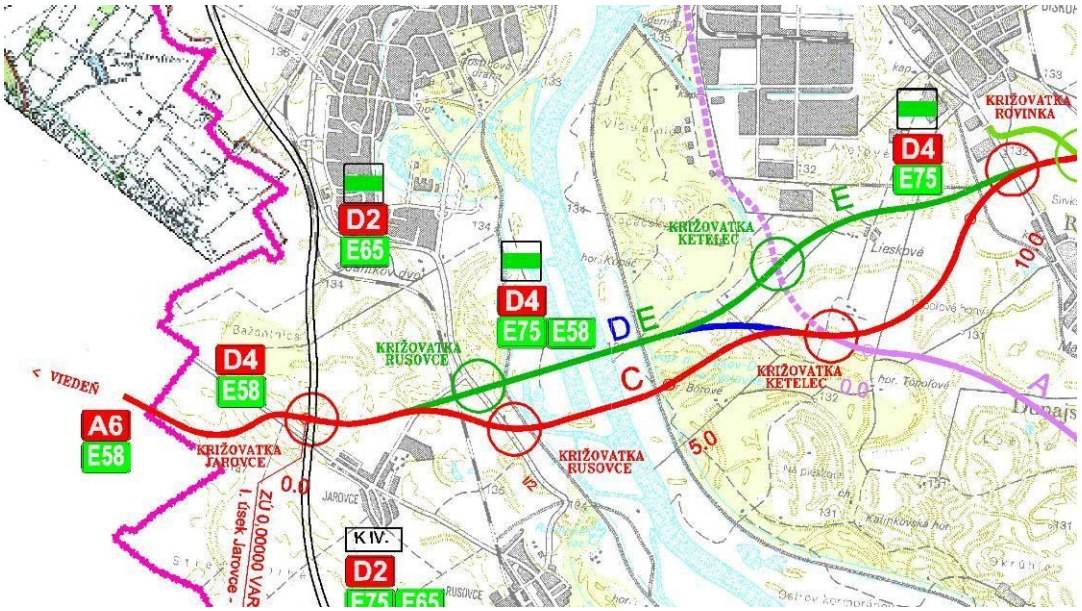
- ***"Highway D4, Jarovce intersection on D2 – Senec intersection on D1"*** , the technical study (elaborated by Alfa 04 a.s. in 06.2005)

- ***"Highway D4, the section of Jarovce – Ivanka North" , the optimisation of the location of the intersections on D4, technical study (elaborated by Geoconsult,s.r.o., in 12.2007)***

- ***"The feasibility and purposefulness study for route of D4 Bratislava Jarovce – Ivanka North – Stupava South – state border between SR / RR***, (elaborated by DOPRAVOPROJEKT, a.s. in 09.2009)

On the basis of the commends raised prior to and during the EIA process, three variants of highway D4 were finally optimised differing in particular by passage through the Danube River and by passage through the protected territory NATURA 2000 (km 0.000 –11.000):

- variant "C" (by bridges above the Danube River) - red
- variant "D" (by a tunnel under the Danube River) - blue
- variant "E" (by bridges above the Danube River) - green



KRIŽOVATKA = INTERSECTION , ÚSEK = SECTION

VARIANT "C" (RED)

The beginning of the section is in the GSI "Jarovce", where highway D4 connects to highway D2. The route continues to the North from the municipal part of BA – Jarovce, it crosses the railway route of Bratislava – Rusovce, road I/ 2 and the right-side embankment of the waterworks Gabčíkovo, at the South edge of Jarovce branch and the planned rowing track, perpendicularly on a bridge above the Danube River and its left-side embankment.

At the right bank of the Danube, it passes by the natural reserve (PR) Dunajské ostrovy and the protected territory belonging to Natura 2000 (Ostrovné lúčky).

On the left bank of the Danube River, it passes as an jetty through PR Gajc (in its narrowest spot) and the Protected Landscape Area (CHKO) Dunajské luhy, that is the part of the protected territory Natura 2000 (Biskupické Luhy). The negative impacts of the passage of highway D4 through this territory shall be eliminated by leading the highway on a flyover bridge till km 5.545.

The bridge over the Danube River is designed in category D 33.5/120 (six-lane), farther with four-lane width arrangement with wider central separating belt so that the possible prospective broadening of the highway D4 to six-lane towards the axis of the highway D4 would be possible up to GSI "Ivanka - West" (the intersection of highway D4 with road I/61). The pathways for pedestrians and cyclists shall be designed within the bridge above the Danube River.

On the left bank of the Danube River, the highway D4 continues to the South of the area of gravel mining in Ketelec, where it shall intersect the expressway R7 with grade separated intersection and the planned municipal collector from Prístavná street, running to the West of Slovnaft, a.s. In km 9.250 of the D4, a large bilateral resting place of "Rovinka" is designed.

The route of highway D4 further intersects the road I/63 by grade separated intersection between the municipal part of Bratislava - Podunajské Biskupice and the village of Rovinka (at GSI "Rovinka") and the railway route of Bratislava – Dunajská Streda. It continues to the North of the village of Most pri Bratislava, where it should intersect the new, prospective expressway Bratislava - Vlčkovce and road I/572 by grade separated intersection (in accordance with the intentions of NDS, a.s.). The interconnection of both roads with highway D4 shall be in one GSI "Most pri Bratislava" by means of collector lanes.

The route of highway D4 further continues before taking-off and landing track of VPD 13-31 of the Airport of M.R. Štefánik and it intersects the Little Danube River by a bridge. In this section, the highway D4 runs in a notch so that it would respect the protective zones of the elongated track of VPD 13-31 of the airport. The highway D4 then passes above the future water area of the western edge of the mining area as a bridge.

Furthermore, the route of D4 is lead to the East of the area of former agricultural cooperative in the location of Prucká sihoť (farther from the airport). On the place of intersection with the planned VPD 13L–31R of the airport the highway D4 is lead in a notch of ca 6.8 – 7.2 m under the terrain level so that it would be possible to additionally build the overage of the highway in the form of "Zálesie" tunnel in future (within the construction of VPD 13L–31R).

The route of highway D4 continues farther in a low fill on the right bank, alongside the Šúr channel, while respecting its protective zones, it intersects by grade separated intersection (bridge) the road I/61 the prospective communication between the municipal part Tanieriky and Sakoň, it intersects in grade separated way the railway route of Bratislava - Galanta and ends on the place of connection of highway D1 in GSI "Ivanka - North". The overall length of the variant "C" is 22.801 km.

VARIANT "D"- (BLUE)

The beginning of the section from GSI "Jarovce" up to km 1.0 is designed the same way as in the variant "C", farther the route of highway D4 crosses the railway route of Bratislava - Rusovce in grade separated way (by an underpass), from GSI "Rusovce" it continues in a line through the "Danube" tunnel having the length of 2.550 km under Jarovce branch and under the main course of the Danube River, more to the North than in the case of variant "C".

From GSI "Ketelec" in km 7.195, the D4 (clover-shaped intersection of highway D4 with expressway R7 - alt. A or tubular shape at R7 - alt. C), continues in the route pursuant to variant "C" till GSI "Ivanka - North" where it ends by connecting to highway D1.

The overall length of the variant "D" is 22.661 km.

The route of tunnel shall be created by two independent routes of directional lanes of the highway, each for one tunnel pipe. As for direction, the route goes with regards to the character of the crossed barrier in a direct line. The mutual distance of the axes of the tunnel pipes has the value of the double its diameter, i.e. 24 m.

The highway D4 is designed in the tunnel in category 2T 8 (four-lane), the other sections outside the tunnel are designed identically as in variant "C". In the case of a tunnel design of the passage of highway D4 across the Danube River, no pavements for pedestrians and routes for cyclists shall be designed in this corridor (just the exit ones).

VARIANT "E" (GREEN)

The route of highway D4 is lead in section from km 0.000 – 4.851 the same ways as in variant "D", while crossing with railway track of Bratislava – Rusovce is designed by overpass, the route then continues with a bridge having the length of 2.722 km above Jarovce branch and the main course of the Danube river. From km 4.851, the route continues to the North of the planned gravel-sand mining in "Ketelec" and the local part named Lieskové.

In km 8.700 of the D4, a large bilateral resting place of "Rovinka" is designed. After the GSI "Rovinka" (the intersection of D4 with road I/63), from km 11.119 the D4 continues in the route pursuant to variant "C" up to the GSI "Ivanka – North".

The overall length of the variant "E" is 22.169 km.

"ZERO" VARIANT

The zero variant represents the condition when all transportation by car must be served by the system of roads and highways in the considered territory, while the planned investment would not take place and the existing road network would be forced to manage the growing traffic demands. The main transportation function is nowadays fulfilled by the sections of highway D1 and D2 passing through the built-up territory of Bratislava, they are complemented with the considered roads of class I., II. and III.
The results of capacity assessment imply some sections of the highway D1 led in the built-up territory of Bratislava would not meet the demands of the traffic load within the time horizon of 2015, since they are loaded in particular by city transport. Furthermore, the sections of roads if class I – I/61 and I/63 are not suitable, they have exceeded the allowed intensity of traffic even nowadays and they directly affect the transport on the selected sections within zero variant.
Further sections of highway D1 would become unsuitable within the time horizon of 2010, 20130 and 2040 due to the increase in transport.

The Report of the Assessment of Impacts of Highway D4, Jarovce – Ivanka North (elaborated by Geoconsult, s.r.o, Bratislava, 04/2010) **thus assessed the following variants**:

- ***"C" red***– the modification of variants "A" and "B" specified in the intention
- "***D" blue*** – tunnel variant under the Danube river
- "***E" green*** – an alternative design (trestle) of passing the Danube river) in the route of the tunnel variant, recommended in the Highway D4 Feasibility and Purposefulness Study
- ***Zero variant***

IV.2. Evaluation of considered alternatives and justification of selected alternative

(the reasons on the basis of which and who reached the conclusion that there are no alternative designs)

The assessment definitively considered alternatives of the routing of highway D4 in this

territory took place within the EIA process, or in the Assessment Report. The assessment was summarized in the Final Opinion issued by the Ministry of Environment of the Slovak Republic under No. 318/2010-3.4/ml on 28.9.2011.

The impacts of the individual variants were assessed from the point of view of their significance and time course of the effect coming from the identification of inputs and outputs of the proposed activity, while the basic classification is their significance in the modification of the contemporary condition of environment, either in negative or also positive direction, as well as the point of view of their effect in time. The assessment was quantified and the results were summed up in the Table pursuant to the following scale.

level 1 - very significant impacts

level 2 - significant impacts

level 3 - less significant impacts

level 4 - impacts of no importance

The expected impacts from the point of view of time may be classified as follows:

a - the impacts during construction

b - the impacts during operation

c - the impacts during construction and operation

When assessing the individual impacts from the point of view of their significance, they considered the fact the considered territory represents the heavily anthropogenically modified agricultural landscape in the proximity of the agglomeration of the capital city of Bratislava, the villages of Most pri Bratislava and Ivanka pri Dunaji. The obverse is the beginning of the section, where the highway passes the protected territories and the territories of Natura 2000 system. Emergency situations were not considered in the assessment.

Table 5: Supposed impacts of the assessed variants in the EIA process

Environmental component	**SUPPOSED NEGATIVE IMPACT FROM THE POINT OF SIGNIFICANCE AND TIME**		
	"D" VARIANT - blue	**"C" VARIANT - red**	**"E" VARIANT - green**
Rock environment and relief	1a	4a	4a
Surface water	2c	2c	2c
Groundwater	1a,2b	2c	2c
Soils	1a	1a	1a
Air	3a, 4b	3a, 4b	3a, 4b
Biota and biotopes	2a, 3b	1a, 2b	1a, 2b
Protected territories, Natura 2000, the Territorial System of Ecological Stability	2a, 3b	1a, 2b	1a, 2b
Countryside scenery	4c	3c	3c
Quality of life of the concerned	2a, 3b	2a, 3b	2a, 3b
Territorial development	4c	3c	3c
Infrastructure and transport	2a	2a	2a
Health risks for population	2a, 4b	2a, 4b	2a, 4b

The evaluation of the considered alternative designs may be described as follows too.

Rock environment and relief - variant "D", the tunnel one, shall have very significant impact on rock environment, in particular in the section of the tunnel, including exit and entry ramps, since it shall pass through highly permeable horizons of gravels where it may come to the pollution of environment and also from the point of view of geotechnical risks the building of the tunnel with entry and exit ramps shall be very demanding as for the assurance of the stability of rock environment with regards to its high water bearing capacity and unfavourable engineering and geological properties (Quaternary and Neogene sediments) for tunnel punching

In the route of variants "C" and "E" the rock environment and relief can be characterised as well load-bearing, without significant geodynamical phenomena and favourable engineering and geological properties. The impacts of the proposed activity are assessed as inconsiderable and just during the construction.

Surface water in the territory is represented by the water courses - the Danube, the Little Danube and Šúr channel, Biskupice branch, the water courses of channels built within the VDG and the water areas of gravel pit Zelená voda.

Surface water is very vulnerable (possible direct pollution) in particular during the construction.

Variant "D" is in the Danube section lead in a tunnel, the proposed technology of tunnel punching does not suppose possible impact on the quality and regime of surface water in the considered territory during construction, however the right-bank ingress channel may be directly affected, since it is in a close proximity of the proposed West portal for punching.

In the considered territory, the *ground water* is very vulnerable with regards to high permeability of the environment. The impact of routing the highway with regards to its position in the CHVO Žitný ostrov is considered to be significant during both construction and operation, while in the case of variant "D", the risk of impact on ground water is very significant during the construction.

Soil are affected in particular by seizures, thus it is very significant impact in particular during the construction.

Air pollution is affected by the overall quality of air in the territory. With regards to the fact the contemporary transport shall be practically just re-distributed and it shall proportionally increase even in the case D4 would not be constructed, just the accumulation of air pollution shall change upon bad dispersion conditions, yet in the open countryside outside the village residential area, where there is substantially better ventilation. The impact is considered to be inconsiderable during the operation. During the construction, it may come to the accumulation of air pollution near construction yards and on the access roads to the construction site at the time of deployment of construction machines and transport capacities in earth works. The impact may be considered to be less significant, however it shall be just temporary.

Biota, biotopes, protected territories, Natura 2000 and ÚSES - in variant "D" the territory is just partially affected by the intervention in forest stands and ecologically significant segments of landscape, while it shall come also to the local tree cutting. We consider this impact to be significant during the construction, when it shall come to a direct liquidation of forest stands. During the operation, the impact of variant "D" shall be less significant from the point of view of stress factors.

From the point of view of impacts on fauna and flora, in variants "C" and "E", the territory is directly affected in particular by the intervention in the biotopes of the European importance and ecologically notable segments of landscape, while it shall come to a considerable tree cutting. This impact is considered to be very significant during construction for both variants, when it shall come to the direct liquidation of biotopes. During the operation, the impact of both variants may be considered to be significant with regards to the production of stress factors (noise, vibrations).

The impacts on the landscape scenery of variant "D" may be considered to be inconsiderable during the construction and operation, with regards to the character of contemporary landscape. Variant "D" routed under the surface shall have a minimum impact on the scenery of the landscape in the protected territory, however it shall be necessary to pay a sufficient attention to the incorporation of entries and exits to the landscape scenery in the case of portal and pre-portal sections of a tunnel

In the case of variants "C" and "E", the impacts on the landscape scenery may be considered to be less significant during both construction and operation, with regards to the character of contemporary landscape. However, the bridge object bridging the Danube River in the protected territory shall have a different impact, where it shall be necessary to ensure its architectonic design incorporated in the territory of Dunajské luhy, while considering the requirements for the minimisation of the impacts on migration and flying over of the birds.

The quality of life of the concerned inhabitants shall be perceived differently during construction and differently during the operation. It shall be heavily affected by the

accumulation of negative factors during construction, such as noise, vibrations, locally increased air pollution with imissions from traffic, the restriction of traffic on contemporary communications and thus also the origin of collapses in traffic. Thus we consider this impact to be significant during construction and less significant during the operation for all variants.

From amongst the negative impacts, the proposed activity affecting *the territorial development* brings about the restrictions and limits for further exploitation of the territory in the corridor of highway with regards to its protective zone and in particular by the division of the territory with a line structure and its barrier effect.

The negative impact shall be demonstrated in the territory in the proximity of Jarovce branch, where they plan the urbanisation of the location for the purposes of recreation, sports and tourism. Green variant "E" interferes with the territory in more significant way, variant "C" to smaller extent and variant "D" not at all.

Infrastructure and transport shall be significantly affected during the construction for the reason of inevitable relaying of networks and communications, traffic restriction, etc. The impact shall significantly act during the construction in all variants.

Health risks are related in particular with operation, mainly the increased noise. During the construction, noise and air pollution from transport on the construction site shall locally significantly affect the concerned parts of the villages in the proximity of construction yards, the facilities on the site, access roads in all variants. During the operation, health risks, in particular noise, shall be eliminated by technical measures, the impacts shall be insignificant.

Positive impacts during construction is supposed in the form of the increase in the production of construction industry, which would bring about the increase demand after other production activities too, in particular in the production of construction raw materials and products. During the production, demand after services related to the construction of demanding work shall increase. During the operation, the significant positive impact shall be the deviation of transport outside the village residential area of the concerned villages and the relief of zero variant, which shall have the overall impact also on the improvement of the accessibility of the territory, the improvement of transport relations in the entire region and the improvement of contemporary unfavourable impacts in particular on the inhabitants (noise reduction, air pollution, health risks and the overall well-being and quality of the affected inhabitants).

Justification of the selection of chosen alternative

On the basis of the results of the process of the assessment carried out pursuant to the Act No. 24/2006 Coll. on the assessment of the impacts on environment, the Ministry of Environment of the Slovak Republic issued the Final Opinion (318/2010-3.4/ml) on 28.9.2011, where it recommended the following variant of highway D4:

- ***km 0.0 – 5.5 - variant "E" - green***
- ***km 5.5 – 7.5 – connection to variant "C" – red*** (when dealing with D4 and GIS "Ketelec", it is necessary to respect the position of expressway R7, D4 and the design of GSI "Ketelec" from the zoning and planning decision documentation "Expressway R7 Bratislava – Dunajská Lužná" and to consider the planned elongation of the expressway R7 up to GSI "Prievoz" within the prepared construction of the "Expressway R7 Bratislava Ketelec – Bratislava Prievoz"),
- ***km 7.5 – the end of the section in the route of variant "C" – red*** (with the clarification of the routing of highway D4 in contact with the protective zones of the Airport of M.R.Štefánik, to finally design the vertical adjustment and shape of the GSI "Ivanka – North " with relation to the design of the subsequent section of D4 Ivanka North – Rača intersection).

Brief justification of the selection of chosen alternative

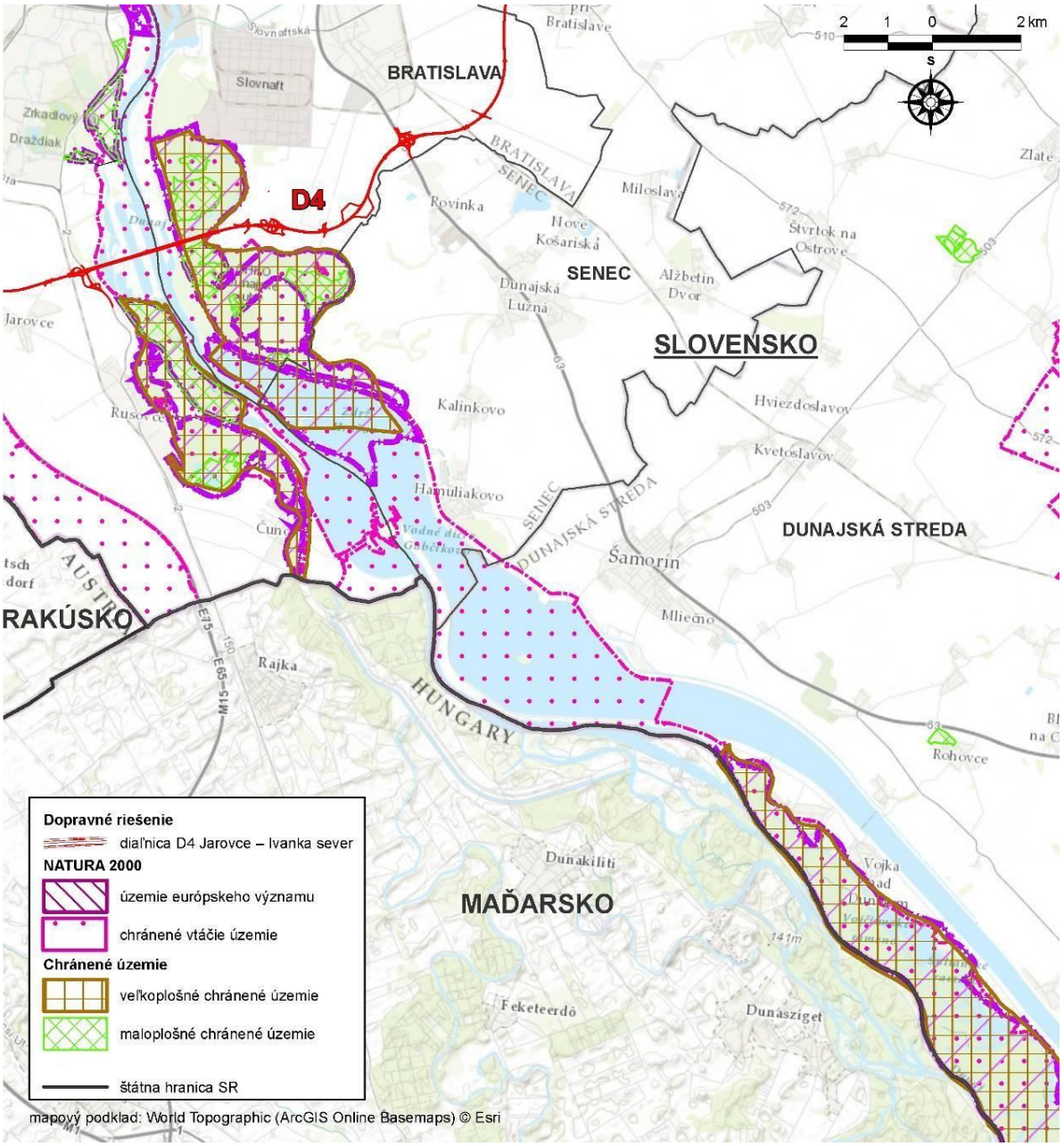
1. The environmentally best-acceptable solution, no forest cutting on the right bank of the Danube

   - does not interfere with the PR Dunajské ostrovy and the protected territories of the European importance Natura 2000 at the right bank of the Danube River. In comparison with the route of D4 pursuant to the urban plan of the capital city of the Slovak Republic of Bratislava, the recommended variant of D4 does not interfere with the protected territories of PR Gajc ad PR Kopáčsky ostrov at the left bank of the Danube River, the route runs in the territory outside the 5th level of protection = ban of structure placing.

2. The intersection with the Danube River is perpendicular and in a direct route, which makes the construction of a bridge above the Danube River and flyover bridges simpler (it enables the application of the technology of bridge sliding out.
3. The intervention in the territory of the CHK Dunajské luhy and the protected territory of the European importance Natura 2000 on the left bank of the Danube River is minimised to the maximum extent, while the negative impacts of the passage of highway D4 through the territory shall be eliminated by leading the highway D4 on the flyover bridge up to km 5.500, which shall enable the migration of game under the highway D4. The other measure is the implementation of compensatory measures-
4. The length of route of D4 is shorter when compared to the other variants.
5. The highest savings of time of travellers,
6. The lowest operation costs of vehicles,
7. It respects the prevailing part of raised objections in the process of the assessment of impacts on environment, the recommended variant suits the majority of public, the majority of concerned authorities and organisations.
8. The substantial part of the route of highway D4 is designed in accordance with the urban plan of the capital city of Bratislava, small deviations in the routing of D4 and the design of GSI result from the detailed verification within zoning and planning decision documentation, while all of them were duly justified.

The non-existence of alternative designs is the result of the long.-term study of routing of "zero circuit" of the capital city of Bratislava, that clearly proved the selected route is the least interference with the close-to-nature and ecologically valued locations and it is efficiently feasible. The fact that any other routing would not stay out of the ecologically valued and protected territories is proven by the following figure. The following map segment shows that any alternative of a surface routing of the highway D4 would not stay out of the CHVÚ Dunajské Luhy, since this protected territory is earmarked from the capital city of Bratislava to the South-east at the length of ca 150 km alongside the Danube River (see the following map segment'.

Fig. 1 Location of the protected territories to the South-east of the capital city of Bratislava



Transport design:
- highway D4 Jarovce – Ivanka North

NATURA 2000
- the territory of the European importance
- protected avian territory

Protected territory
- large-area protected territory
- small-area protected territory
- state boundary of the Slovak Republic

SLOVENSKO = SLOVAKIA
MAĎARSKO = HUNGARY
RAKÚSKO = AUSTRIA

V. URGENT REASONS OF HIGHER PUBLIC INTEREST

The description of the reasons of higher public interest and clarification why the given reasons are considered to be such reasons.

In the case of the intention of construction and operation of highway D4 Bratislava, Jarovce – Ivanka North, the reasons of hither public interest may be defined in the following groups of interests. The interests of social and economical character, the interests in the improvement of health and safety of people, the interests in the favourable impact on the components of environment the maximum possible extent.

The Interests of Social and Economical Character

The social and economical effects of the construction and operation of the highway D4 Bratislava, Jarovce - Ivanka North shall be manifested in transport parameters by re-distribution of traffic after the commencement of the use of new structural work, but also on the original part of the concerned road network, by reaching higher driving speed, travel speed and safety of users and by the reduction of negative impacts on the concerned population as the consequence of higher quality of new structural work in comparison with the deteriorating contemporary situation.

The economical effects shall be manifested in particular in the final clients of the given section of road network by reduction of their costs (fuel consumption) related to the transport of cargo and passengers, or to the operation of the vehicles. The social effects shall be shown on the drop of travel time spent by the passengers of passenger vehicles and buses.

The positive impact of the investment is also the increase in the performance of road network in the given location and partially on the territory of entire Bratislava and also the improvement of serviceability as well as the creation of conditions for the development of the territory of interest (the positive impact for the placement of prospective investments in this region, a good transport accessibility is very important for investments, the positive impact on the urban development of satellite cities and villages of Bratislava) and also the creation of job opportunities in the period of construction, when we may suppose the job for several hundreds of employees, similarly in the period of operation we may expect the job for several tens of employees.

Interests in the Improvement of Health and Safety of People

After putting the structure to operation the benefits of the assessed activity shall be immediately visible for the inhabitants of the concerned villages by re-distribution and subsequent reduction of traffic intensity on the concerned road network that shall take place due to the commencement of the use of new, given section of highway. By reducing the traffic lad, the quality and comfort of life in particular of the inhabitants nearby the roads leading through a village residential area, by reducing noise, vibrations and emissions, the safety of traffic and accident rate shall be improved.

Interests in the Improvement of Environment Components

Air - nowadays transport is provided for via the network of town communications, they shall be relieved by load that shall be taken over by highway D4. Thus they expect the reduction of harmful substances from automotive transport in particular on municipal communications on which the entire transit runs nowadays.

Noise load – through the reduction of traffic load of the concerned municipal and village communications it shall automatically come also to the reduction in noise lad coming from the transport in these sections.

Soil and water – due to the supposed reduction of accident rate the risk of soil and water contamination due to possible accidents would be reduced too.

VI. COMPENSATORY MEASURES

VI.1. Overall objectives and individual objectives in relation to biotopes and species and ecological processes that must be compensated. Reasons why the suggested measures are suitable for the compensation of negative effects

Overall objectives and individual objectives in relation to biotopes and species and ecological processes (functions) that must be compensated. Reasons why the suggested measures are suitable for the compensation of negative effects

The overall objective of compensatory measures shall be the assurance of conditions or the preservation of the population of three bird species: Black Kite (*Milvus migrans*), White-tailed Eagle (*Haliaeetus albicilla*) and Black Stork (*Ciconia nigra*) in a favourable condition from the point of view of their protection. The condition of the species from the point of view of protection is considered to be favourable when the data of the population dynamics of the species suggest the viable element of the biotope maintained for a long time, natural area of the species has not been diminished and there are sufficient biotopes(§ 5 for long-term preservation of its population. (Article 5 Para 1 of the Act No. 543/202 Coll.).

Therefore it is decisive for the preservation of bird species population to maintain or improve the ecological condition of the biotopes the species are bound to.

The compensatory measures in this case should directly replace (several times) the concerned nesting and feeding biotopes of the named bird species to such an extent that the overall objective of the favourable condition of the named subjects of protection would be maintained. The compensatory measures shall directly replace the taken over or otherwise affected nesting and feeding biotopes, affected by the construction and operation of highway D4, in particular a new forest shall be planted for the cleared or otherwise touched forest areas, new grassland with permanent grass growth shall be planted for taken over and otherwise affected grassland, the area of Biskupice branch shall be revitalised for the restriction in the use of water areas as feeding biotope in order to improve the food assortment in the other territory of CHVÚ. Their location is proposed n the places of minimum anthropogenic activities, which even stresses their suitability together with other reasons that are described in detail in the following chapters.

VI.2. Scope of compensatory measures and their location in relation to the location negatively affected by the plan/project

Scope of compensation measures (areas, size of population) and their location in relation to the location negatively affected by the plan/project

The scope and segmentation of compensatory measures is described in details by the following Table.

Table 6: *The segmentation and scope of compensatory measures for the intention of D4 Bratislava, Jarovce – Ivanka North*

SCOPE OF COMPENSATORY MEASURES	SEGMENTATION WITHIN THE ZONING AND PLANNING DECISION DOCUMENTATION FOR HIGHWAY D4 **D4**
New forest areas (20 ha)	Object 071 **Compensatory measure 1**, the change of the lands to a forest
	Object 072 **Compensatory measure 2**, the change of the lands to a forest in the cadastral territory of Čunovo
	Object 073 **Compensatory measure 3**, the change of the lands to a forest in the cadastral territory of Čunovo
New grassland (30 ha)	Object 074 **Compensatory measure 4**, the grassing of lands in cadastral territory of Podunajské Biskupice
	Object 075 **Compensatory measure 5**, the grassing of lands in cadastral territory of Kalinkovo
Making the Biskupice branch passable	Object 076 **Compensatory measure 6**, making the Biskupice branch passable
	Object 077 **Compensatory measure 6**, a bridge on a forest road above Biskupice branch
The assurance of the protection of existing forest stands (20 ha)	**Compensatory measure 7**, The protection of forest biotopes by law

The part of the territory negatively affected by the intention of the construction and operation of highway D 4 may be located in the surroundings of an imaginary line between the village of Jarovce and the South-east edge of the industrial area of Slovnaft, a.s. In relation to this concerned territory, the compensatory measures are located in wider surroundings of the concerned territory s that they would bring about the ecological effect without further undesirable impacts and also so that they would be accessible for the individuals the habitats of which shall be destroyed by the intention or otherwise affected by it.

All the compensatory measures are at the distance of up to ca 5.5 km from the intention. Making the Biskupice branch passable is located to the North of highway D4, other compensatory measures to the South to South-east of highway D4.

VI.3. Identification and location of areas where compensation measures should be applied and the identifications of ownership, user and rental relations on the place the compensation measures take place

Identification and location of areas where compensation measures (including maps) should be applied and the identifications of ownership, user and rental relations on the place the compensation measures take place

Compensatory measure 1 - in the documentation for site permit, Object 071

District: Bratislava V
Municipality: Bratislava- municipal part Rusovce
Cadastral territory: Rusovce
Plot of land of C-KN Register: 313/1
Area: 7.4659 ha
Ownership: private
Land type pursuant to Land Register: arable land
Used by: Agricultural Co-operative Poľnohospodárske družstvo Dunaj Bratislava Rusovce

Compensatory measure 2 - in the documentation for site permit, Object 072

District:	Bratislava V
Municipality:	Bratislava- municipal part Čunovo
Cadastral territory:	Čunovo
Plot of land of C-KN Register:	1446, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464/1, 1464/2, 1464/3, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507
Area:	9.0333 ha
Ownership:	private, state (SPF)
Land type pursuant to Land Register:	arable land, permanent grassland, built-up areas and courtyards, other areas
Used by:	Agricultural Co-operative Poľnohospodárske družstvo Dunaj Bratislava Rusovce

Compensatory measure 3 - in the documentation for site permit, Object 073

District:	Bratislava V
Municipality:	Bratislava- municipal part Čunovo
Cadastral territory:	Čunovo
Plot of land of C-KN Register:	1540, 1541/1
Area:	8.9109 ha
Ownership:	private
Land type pursuant to Land Register:	arable land, gardens
Used by:	Agricultural Co-operative PD Dunaj Bratislava Rusovce

Compensatory measure 4 - in the documentation for site permit, Object 074

District:	Bratislava II
Municipality:	Bratislava- municipal part Podunajské Biskupice
Cadastral territory:	Podunajské Biskupice
Plot of land of C-KN Register:	5888
Area:	22.6297 ha
Ownership:	private, state (SPF)
Land type pursuant to Land Register:	arable land
Used by:	Agricultural Co-operative PD Podunajské Biskupice

compensatory measure 5 -- in the documentation for site permit, Object 075

District:	Senec
Municipality:	Kalinkovo
Cadastral territory:	Kalinkovo
Plot of land of C-KN Register:	1099/3, 1099/6, 1099/9, 1099/10
Area:	9.7407 ha
Ownership:	private, state (SPF, Lesy SR, š.p.)

Land type pursuant to Land Register: arable land
Used by: Agricultural Co-operative PD Podunajské Biskupice

Compensatory measure 6 - in the documentation for site permit, Object 076

District:	Bratislava II
Municipality:	Bratislava- municipal part Podunajské Biskupice, Bratislava - municipal part Ružinov
Cadastral territory:	Podunajské Biskupice, Ružinov
Plot of land of C-KN Register:	3880/69, 3880/90, 3985/10, 3990/13, 3990/20, 3993/7, 3993/11, 3996, 3997, 3998/8, 3998/14, 3998/15, 3998/16, 3998/18, 3998/19, 4069/1, 4072/2, 5331/1, 6248/3, 6250/13, 6250/18, 6250/19, 6250/20, 6250/22, 6250/27, 6250/28, 6251/10, 6251/11, 6251/13, 6251/14, 6267/1, 6267/6, 6269/1, 6269/2, 6269/10, 6269/11, 6269/12, 6269/13, 6292/1, 6292/9, 6292/10, 6292/11, 6292/12
Area:	1.4196 ha (permanent seizure) and 12.0113 (seizure up to 1 year)
Ownership	private, state (SVP, Lesy SR, š.p.)
Land type pursuant to Land Register:	arable land, permanent grassland, forest stands, water area, built-up areas and courtyards, other areas
Used by:	Lesy SR, š.p., SVP, š.p

Compensatory measure 7

District:	Senec, Bratislava V
Municipality:	Kalinkovo, Bratislava- municipal part Čunovo, Dunajská Lužná
Cadastral territory:	Kalinkovo, Čunovo, Nové Košariská
Plot of land of C-KN Register:	1510, 1432, 1440, 1399, 1489, 1444, 1443, 1442, 1441, 1435, 1436, 1437, 1433, 1431, 1445, 1434, 1397, 1395, 1398, 1400, 1093/3, 1100/3, 1098/3, 1093/2, 1093/7, 1095/1, 2765
Area:	23.4461 ha
Ownership:	private, state (SPF, Lesy SR, š.p., Bratislava)
Land type pursuant to Land Register:	forest lands
Used by:	Lesy SR, š.p.

VI.4. Description of the place of planned implementation of compensatory measures. Occurrence of biotopes and species and the state of their protection, the use of the territory prior to the location of compensatory measures etc.

Description of the place of planned implementation of compensatory measures. Occurrence of biotopes and species and the condition of their protection (Article 5 Para 2 of the Act), the utilisation of the territory prior to the location of compensatory measures, etc.

Compensatory measure 1 - in the documentation for site permit, Object 071

The areas intended for the implementation of the compensatory measure 1 - the planting of a new forest is nowadays intensively cultivated agricultural area used mainly for growing of cereals. There are the remnants of inundated forests (From the West and South part) located in the proximity of the area, having various age and species composition, or in other words various ecological quality.

There is another intensively agriculturally used area from the North, the East side is restricted by the cycling route and right-side ingress channel of the waterworks Gabčíkovo.

The area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll. on nature and landscape protection. The territory earmarked for the compensatory measure 1 is also the part of CHVÚ Dunajské Luhy with the reasonable legislative protection.

Compensatory measure 2 - in the documentation for site permit, Object 072

The areas selected for the implementation of the compensatory measure 2 - the planting of a new forest is nowadays intensively cultivated agricultural area used mainly for growing of cereals, similarly as the area for compensatory measure 1. There are the remnants of inundated forests in the proximity of the areas from all sides, mainly of older age (several ten years old).

The area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll. on nature and landscape protection. The territory earmarked for the compensatory measure 2 is also the part of CHVÚ Dunajské Luhy with the reasonable legislative protection.

Compensatory measure 3 - in the documentation for site permit, Object 073

The areas selected for the implementation of the compensatory measure 3 - the planting of a new forest is nowadays intensively cultivated agricultural area used mainly for growing of cereals, similarly as the other areas intended for afforestation. There are the remnants of inundated forests in the proximity of the areas from all sides, mainly of older age (several ten years old), the forest defining the forest from South is rather narrow.

The area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll. on nature and landscape protection, the remaining part of the area is outside the CHKO Dunajské Luhy, level of protection I in accordance with the stipulations of the Act No. 543/2002 Coll on nature and landscape protection applies here. The territory earmarked for the compensatory measure 3 is also the part of CHVÚ Dunajské Luhy with the reasonable legislative protection.

Compensatory measure 4 - in the documentation for site permit, Object 074

The implementation of the compensatory measure 4 - the planting of grassland is nowadays the cultivated agricultural area used in rotation as grassland or as arable land. The selected area represent a part of such cultivated area, in particular it is its South-east section. In the proximity of the area (from the South and East side), there are the remnants of inundated forests, mainly of older age (several tens year old) and the remaining part is earmarked by agricultural land.

The area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll on nature and landscape protection. Identically, the area for compensatory measure 4 is also the part of CHVÚ Dunajské Luhy with the reasonable legislative protection.

Compensatory measure 5 - in the documentation for site permit, Object 075

The area for compensatory measure 5 - the planting of grassland is nowadays the cultivated agricultural area used for the intensive cultivation of various crops. There are the remnants of inundated forests in the proximity of the area (from West and East side), they penetrate also to the part of the earmarked area for grass planting in its Easter part. The area is restricted from the North by agricultural land, there is mainly grassland from the South in the proximity of left-side ingress channel of the waterworks Gabčíkovo.

The area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll on nature and landscape protection. The Nature and Landscape Protection Section Identically, the area for compensatory measure 5 is also the part of CHVÚ Dunajské Luhy with the reasonable legislative protection and the part of ÚEV Biskupické luhy with the reasonable legislative protection.

Compensatory measure 6 - in the documentation for site permit, Object 076

The Biskupice branch itself or its remnants together with the areas indented for its revitalisation and making it passable is located in the forest units on the left bank of the Danube. From the point of view of the conservation condition, the area belongs to the large-area protected territory CHKO Dunajské Luhy, zone D – level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll on nature and landscape protection. Furthermore, it is the part of CHVÚ Dunajské Luhy with a due legislative protection and the part of ÚEV Biskupické luhy with the reasonable legislative protection.

The water area is used for fishing, the surrounding forest stands are prevailingly subjected to forest management, which corresponds also to their ecological quality, save several preserved sections of stands on the bank in the proximity of Biskupice branch with relatively original species composition and natural development.

A small part of the territory earmarked for compensatory measure 6 is formed by grassland, mowed in the proximity of artificial embankments, yet left for natural succession elsewhere.

Compensatory measure 7

All the forest areas selected for the provision of compensatory measure 7 – the increase of the legislative protection of selected forest stands belong to the CHKO Dunajské Luhy, zone D.
- level of protection II in accordance with the stipulations of the Act No. 543/2002 Coll. on nature and landscape protection. Furthermore, they are the part of CHVÚ Dunajské Luhy with a due legislative protection and the part of ÚEV Biskupické luhy with the reasonable legislative protection.

The areas are used for forest management activity as inundated forest stands in the long run. However, it shall be necessary to stress out here that nowadays they create the last remnants of not very well original inundated forest stands of high ecological value without the significant portion of invasive plant species, thus it is possible to say that they are in a favourable condition from the point of view of the biotope condition.

There are two types of forest biotopes on the selected forest areas, namely: Ls1.1 – Willow-poplar lowland inundated forests (forest plot No. 470C), second type is Ls1.2 – Oak-elm and ash lowland inundated forests (forest plot No. 6, 467 I.PS, 467 III.PS, 469 and 470A).

VI.5. Supposed results how the proposed measures shall compensate the negative effects of the project/plan for the integrity of the location and how they would allow the preservation of the compactness of the system of protected territories

The project of compensatory measures (the compensatory measure 1 to 3 - new forest stand planting) creates sufficient preconditions for the contemporary fragmented forest territory near municipal part of Bratislava - Čunovo to provide sufficiently suitable conditions for nesting of White-tailed Eagle after the afforestation of the selected areas and the unification of the fragmented territories. White-tailed Eagle nested in this location in past, but its nesting place has ceased due to the anthropogenic impacts, therefore after compacting the forest stand, there is a great change of its return to this area of CHVÚ for the purpose of nesting.

The revitalisation of Biskupice branch and making it passable (compensatory measure 6) shall replace the negative impacts induced by the construction and operation of highway D4 to the biotopes of Black Stork in the CHVÚ Dunajské luhy by the improvement and extension of food biotope in the territory, which should identically affect its population in the concerned part of the CHVÚ in a positive way.

The creation of grassland (compensatory measures 4 and 5) shall replace the negative impacts for Black Kite by the expansion of suitable feeding biotopes for the species. This should identically positively affect the maintenance or expansion of the population of the species in the entire CHVÚ.

The compensatory measure 7 - the improvement of the protection of the existing forest stands by law should fulfil the function of the suitable nesting biotope for all concerned species till the newly established forest areas shall be ecologically able to fulfil the function of nesting biotope. Thus we may stay the objective of the measure is the preservation of suitable nesting biotopes to maximum possible extent in the concerned territory.

VI.6. The schedule of the implementation of compensatory measures stating the information when the achievement of expected results is foreseen

The schedule of the implementation of compensatory measures stating the information when the achievement of expected results is foreseen

After the zoning and planning decision shall be issued for all its parts and after the settlement of the ownership relations, the project of compensatory measures as such shall be the subject of planning permit, including the obtaining of all necessary consents and permits.

After the planning permit issuance it shall be necessary to implement the compensatory measures so that the protection of the overall coherence of the European system of protected territories would be ensured even after the commencement of the construction of highway D4 Bratislava, Jarovce – Ivanka North.

The expected results from the implementation of compensatory measures shall practically arrive in the case of planting the grassland, making Biskupice branch passable within 1 year. The effect of the improvement of the protection in the selected already existing forest stands shall take place practically immediately after the termination of the implementation of the measure. In the case of newly planted forest stands, the required results (including the ecological functions) may be expected after 40 years as of the completion of the planting at the soonest.

The particular schedule is the part of the document as a separate Annex 1 The Schedule of Compensatory Measures.

VI.7. List of required permits for the implementation of compensatory measures pursuant to special regulation, if necessary, the subjects responsible for their obtaining and preliminary consents of the owners of lands on the place of the planed compensatory measures with their implementation

The list of required permits for the implementation of compensatory measures pursuant to special regulation, if necessary, the subjects responsible for their obtaining and preliminary consents of the owners (administrators, leaseholders) of lands on the place of the planed compensatory measures with their implementation

The list of required permits for the implementation of compensatory measures

- zoning and planning decision
- the decision on the change in the exploitation of the territory (grassland, forest areas),
- planning permission.

The preliminary consents of the owners of the plots of land

In accordance with the law in force (the Building Code No. 50/1976 Coll. as amended, Article 38a, Article 108), it is not necessary to require the consent of the owners of the plots of land for the implementation of the compensatory measures for highway D4 Bratislava, Jarovce – Ivanka North, since the named construction is of a public interest.

VI.8. Costs and method of funding of the proposed compensatory measures

The price of the implementation of the project of compensatory measures is in this stage of project preparation assessed at the amount of 9,6932,060.- EUR and it covers their implementation and the subsequent care after them. The care after the newly established areas

and objects is quantified almost to 30,000.- EUR for 10 years and it represents for the forest stands the repeated afforestation, protection against game, mowing and the weeding out cutting, in the case of grassland it is mowing, turning and pushing off the dry grass, for the bridge object and Biskupice branch itself (the objects 076 and 077) it would regard the painting of the structures and other small treatments.

The costs of the implementation of the project of compensatory measures and the subsequent care after them are included in the costs of the construction of the highway D4 Bratislava, Jarovce – Ivanka North, identically as the costs of the purchase of the lands necessary for their construction or the compensation for the limitation of the ownership rights related to the other concerned lands.

VI.9. Subjects responsible for the implementation of compensatory measures

The investor shall be responsible for the implementation of the project of compensatory measures the intention of which requires the implementation of such project. In this case it is NDS, a.s. as the state company.

VI.10. Plan of monitoring of the compensatory measures including the proposal of supposed corrective measures stating the subjects responsible for their implementation

The monitoring of the success (operability) of the compensatory measures shall be the subject of the activity of the ŠOP SR as the state institute responsible for nature conservation that shall decide if necessary also on the corrective measures (their contents and scope cannot be specified in details nowadays, even whether they would be necessary). The investor of the construction of highway D4 Jarovce – Ivanka North , thus NDS, a.s. shall be responsible for the implementation of the possible corrective measures.

The scope of the monitoring of the success of the compensatory measures may be summarised in the following points:

- Monitoring of the impact of the intention during operation of the highway on bird populations that are the subjects of protection in the CHVÚ Dunajské luhy. This is the monitoring of the density of occurrence of the individual bird species up to the distance of min. 500 m at both sides of the highway. The monitoring should start one year before the construction and it should continue every year, minimally till the 5th year of the operation.
- The monitoring of the condition of compensatory measures and their development in time. The monitoring should capture the development of the biotopes and their gradual taking-over of the functions for which they were implemented. It is necessary to start with the monitoring immediately after the implementation of compensatory measures. The assessed duration is 3 years for grassland, 5 years for the monitoring of the operability of passable Biskupice branch, 10 years for newly established forest areas and 20 years for already existing forest stands.
- The monitoring of the exploitation of the areas of compensatory measures by the individual bird species, i.e. the monitoring of their occurrence (population density) and what is the purpose of the use of the areas by the individual bird species being the subjects of protection. The frequency of the type of monitoring is necessary annually for 5 years as of their implementation, subsequently every 5 years for another 20 years.

It is necessary to note the monitoring of the rate of success of the compensatory measures can be modified for the purpose of the provision of objective and trustworthy results if necessary.

IV.11. Detailed implementation project of compensatory measures.

It is the part of this document as a separate Annex No. 2 Detailed implementation project of compensatory measures.

Elaborated by:

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Disclaimer

This is an English translation of a document that was originally produced in the Slovak language. While we have exercised utmost care to make this translation accurate, it may contain typing or translation errors. Therefore, always consult the Slovak original before making decisions on the basis of this translation.

The name of this document in Slovak is *Návrh kompenzačných opatrení*. The file name has not been changed.

We hereby confirm that the European Bank for Reconstruction and Development shall have no responsibility for the translated content.

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