



AMAZON OF EUROPE BIKE TRAIL

Output 5.1.
Amazon of Europe Bike Trail
Route Plan

Southern route

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1. INTRODUCTION

The Amazon of Europe Bike Trail is a joint initiative of 5 countries to establish a long-distance bike trail along three rivers focusing on the territory of future 5-country UNESCO Biosphere Reserve Mura-Drava-Danube (TBR MDD). The project is funded by the European Union (ERDF, IPA) within the framework of the Danube Transnational Programme: 15 partners are working together from 5 countries. The project aims to create a sustainable tourism product considering valorisation of natural and cultural resources as a basic pillar. The result of the project will be a unique brand and joint bookable sustainable tourism product, based on nature-oriented visitor guidance and equipped with commonly designed infrastructure (resting areas, info points) elements, offering an excellent nature and cycling experience at the same time.

The aim of current document is to give an overview about the results of route planning process with specific regards to the planned itinerary of the Amazon of Europe Bike Trail.

This document is a result of the cooperation of 11 regional coordinators based on a previously prepared and jointly accepted methodology in WP5, which is also in line with other documents/methodologies in work packages WP3, WP4. The bottom-up approach was a crucial principle behind the process, each regional coordinator has had the responsibility to designate the itinerary within its respective area in line with the criteria of the common methodology. Regional coordinators prepared their surveys and regional route plans as the most important sources of inputs, the contents of these have been integrated into the current document. However, the detailed route plan document does not include all the information provided by the regional coordinators in their regional documents, therefore, for a full understanding, they are recommended to be read or interpreted together.

Regional Coordinators / Name of organisation	Area responsible for
Tourism Association Region Bad Radkersburg	Austria
Municipality Velika Polana	Slovenia
West-Pannon Regional and Economic Development Public Nonprofit Ltd.	Hungary (Zala County)
Balaton-felvidéki National Park Directorate	Hungary (Zala County)
Entrepreneurs' Centre of Somogy County Foundation	Hungary (Somogy and Baranya Counties)
Tourism board of Međimurje county	Croatia (Međimurje County)
Koprivnica Križevci County	Croatia (Koprivnica Križevci County)
Public institution for management of protected parts of nature and ecological network in Virovitica Podravina county	Croatia (Virovitica Podravina County)
Public Institution Development Agency of Osijek-Baranja County	Croatia (Osijek-Baranja County)
Municipality of Apatin	Serbia
City of Sombor	Serbia

1. Table: List of the regional coordinators with territories they are responsible for

The mission of West-Pannon Nonprofit Ltd. – as responsible partner of route planning activity – was to ensure and check the consistency of the regional route proposals defined by respective coordinators compared to the principles of the common route planning methodology. Considering the fact that changes happened frequently during the long (around 1 year) planning phase, it required continuous updates of the contents of the plan. Thanks to the active involvement and quality inputs/contribution by regional coordinators, at the end of Period 4 of the Amazon of Europe Bike Trail project, the planning process has been concluded.

Of course, further minor modifications of the itinerary can be expected due upcoming factors that could not be foreseen during planning – e.g. signposting, resting place permission issues with authorities, newly developed bike path can be included, etc. These future changes will be the part of the document “Report on route implementation” (5.2. Deliverable), which will be elaborated in a later phase of the project.

2. BRIEF SUMMARY OF THE ROUTE

The total length of the planned Amazon of Europe Bike Trail – without detours – is 1260 km, it has been divided into northern and southern routes which follow the Mura, Drava and Danube rivers on both sides and affect 5 countries - Austria, Slovenia, Croatia, Hungary and Serbia.

	Length of main route	Length of detours ¹
Total	1260 km	244 km
AoE BT Northern route	553 km	89 km
AoE BT Southern route	707 km	155 km

2. Table: Main figures of route lengths

The trail consists of several sections which can be passed and visited in one day by bicycle – called daily stages (the criteria of one single daily stage were defined in the common methodology). A total number of **27 daily stages are part of the trail**: 11 of them belong to the northern part of the route while the southern part of the route contains 16 daily stages. Each of them has an identifier which is a combination of a letter and a number. Letters “N” or “S” referring to northern or southern, while the continuous numbering of the stages starting from west to east, begins in Mureck, Austria. Stage points are start/end points of a daily stage, altogether 27 stage points have been selected along the entire trail. Besides the two main entry points / end points of the trail (Mureck and Mohács) city of Osijek in Croatia is the only spot where the two routes intersect each other but there are numerous other options (bridges, ferries) to change between routes.

The main route of the trail by definition is a continuous connection between two stage points without any bifurcation and has been defined in line with the set of criteria in the route planning methodology. It generally runs parallel to the rivers, but it is not necessarily using the closest road to them. Detours are connected to the main route where it is justifiable, often run perpendicularly to the rivers. A detour has been considered as justified if it creates a connection with natural/cultural sites closely related to the values of the project, offering river views, river access, or leading to popular natural or cultural sites, called them “must see” points. The total length of the detours regarding the entire trail is 244 km.

Total length of 16 daily stages have been defined along the southern route of the Amazon of Europe Bike Trail is 707 km. The average length of a daily stage on the southern route is 44 km, the shortest stage is S5 Varaždin-Prelog with 24,25 km, while the longest one is just over 70 km (S11 Noskovci-

¹ This is the length of the detour end points (usually a „must see” attraction or river viewpoint). The tourists have to cycle this length twice (to go there and back)

Belišće). Daily stage S7 Koprivnica- Đurđevac has the longest combined length (main route + detours) due to the extended “network of detours” on the left riverside at Repaš.

Stage	Starting point	End point	Length of the main route	Length of the detours	Country
S 1	Mureck (AT)	Banovci (SLO)	47,92 km	4,53 km	Austria & Slovenia
S 2	Banovci (SLO)	Mursko Središće (CRO)	30,17 km	5,05 km	Slovenia & Croatia
S 3	Mursko Središće (CRO)	Donji Vidovec (CRO)	60,13 km	6,57 km	Croatia
S 4	Donji Vidovec (CRO)	Varaždin (CRO)	42,89 km	5,88 km	Croatia
S 5	Varaždin (CRO)	Prelog (CRO)	24,34 km	12,43 km	Croatia
S 6	Prelog (CRO)	Koprivnica (CRO)	56,43 km	6,98 km	Croatia
S 7	Koprivnica (CRO)	Đurđevac (CRO)	50,73 km	33,76 km	Croatia
S 8	Đurđevac (CRO)	Pitomača (CRO)	34,87 km	8,68 km	Croatia
S 9	Pitomača (CRO)	Kapela Dvor (CRO)	25,4 km	9,22 km	Croatia
S 10	Kapela Dvor (CRO)	Noskovci (CRO)	61,44 km	9,59 km	Croatia
S 11	Noskovci (CRO)	Belišće (CRO)	73,9 km	3,98 km	Croatia
S 12	Belišće (CRO)	Osijek (CRO)	32,4 km	-	Croatia
S 13	Osijek (CRO)	Erdut (CRO)	34,15 km	-	Croatia
S 14	Erdut (CRO)	Apatin (SRB)	35,51 km	3,14 km	Croatia & Serbia
S 15	Apatin (SRB)	Sombor (SRB)	36,3 km	24,26 km	Serbia
S 16	Sombor (SRB)	Mohács (HUN)	60,4 km	21,11 km	Serbia & Hungary
Total length of the southern route:			707 km	155,18 km	

3. Table: Daily stages of the Amazon of Europe Bike Trail's southern route

3. STRUCTURE OF STAGE PRESENTATIONS

The document goes through the planned itinerary of Amazon of Europe Bike Trail stage by stage, following the same structure. Most important information is summarized in five subchapters in case of each daily stage:

1. The first one contains basic information about the respective daily stage which means coordinates and brief description about start and end points (stage points), total length, length of detours as well as the proportion of sections with unpaved surface. A simplified map shows the itinerary of the stage.
2. The second subchapter gives a short overview on the stage's services and other important features in the form of few sentences.
3. Subchapter "Information about the route and its condition" contains a table and textual description as well. Each daily stage is divided into shorter subsections being the basic units, in order to give a more detailed overview of the route conditions. The table provides information by subsections, every row showing a different subsection according to changes of main route quality attributes (road quality or type of the road). Every subsection has a unique identifier which is visible in the first column of the table. Second, third and fourth columns show their start and end points with coordinates (based on Google Maps) and their lengths. It also includes information regarding the type of the roads (bicycle lane, bicycle path, public road, etc.) and surface type (asphalt, gravel, dirt, grass, etc.) used by the trail. The last column is a quality-based classification of each stretch on a 3-point scale² which ensures comparability and helps to identify those parts where further improvement is needed. Traffic situation is not part of this classification, because it is focusing only on the physical condition of the roads. Anyway, the traffic related information can be found in the eighth column if data was available to the respective subsection. The unit of measure in these cases is annual average daily traffic (AADT).

Textual description below the tables gives additional information to each daily stage, putting special emphasis on rideability and road surface. This part gives an overview about the process of the route planning, why the proposed route was assigned and what kind of decisions had to be made. Moreover, strengths, weaknesses, problems, and questionable parts regarding a daily stage also described in this subchapter, as well as possible special features which deserve attention.

4. Since the methodology set up a criterion that every stage has to include at least 2 river viewpoints, thus, a separate subchapter is devoted to list these places with coordinates. This is supplemented by

² 3 stars: good quality, 2 stars: acceptable, 1 star: further improvement is needed

the list and coordinates of additional nature experiences which are relevant in terms of the trail concept.

5. The last subchapter summarizes each daily stage along the planned Amazon of Europe Bike Trail in terms of infrastructural background. In case of several partners, the exact location of infrastructure elements which are planned to be placed in frame of the project, are still not decided due to some unforeseen, mainly administrative reasons (approvals from settlements, delays of contractors, etc.). Furthermore, majority of the specific regional road signposting plans are not elaborated yet, therefore the exact number and locations of the needed road signs are still to be finetuned and could not be included here. Thus, the contents of this subchapter cannot be considered final, but it contains all the latest information regarding the topic. The route implementation document referred to above will contain the detailed database of signposts along the whole Amazon of Europe Bike Trail.

4. AMAZON OF EUROPE BIKE TRAIL – STAGE BY STAGE

4.1. S1 Mureck (AT) – Banovci (SI)

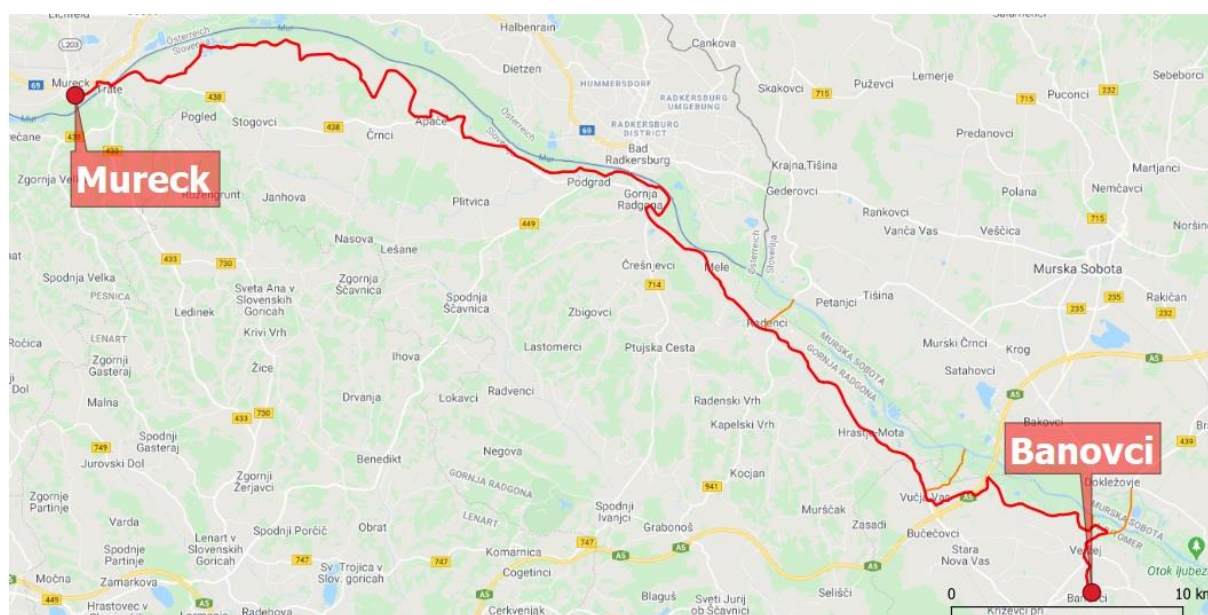
4.1.1. Basic information

Start point of the daily stage: Mureck (Austria), Austraße. Coordinates: 46.704687, 15.770850

End point of the daily stage: Banovci (Slovenia), intersection. Coordinates: 46.571572, 16.166695

Length of the daily stage: 47,92 km (19 km – 40 % is unpaved)

Length of the detour(s): 4,53 km (2,23 km – 49 % is unpaved)



1. Figure: Map of S1 stage, Mureck-Banovci

Mureck is a small town in Austrian side of the Mura river which is the official start point of the whole trail thus it is a common starting place for the first northern and southern stages, as well. The city can offer a wide range of services including places to stay, shops and bicycle related services.

Banovci is a small village south of Veržej. Although its population number is around 200 people, the settlement has a relatively large number of accommodations next to its thermal spa. Missing services are available within 2 kms range, in Veržej. There is a train station 1,5 km from Banovci which ensures the connection with Murska Sobota, Ljutomer, Ormož. Carriage of bicycles is possible on the train.

4.1.2. Short summary of the stage

Although the start point of the stage trail is in Mureck (Austria), almost the entire stage can be found in Slovenia. The cycling path from Mureck to Banovci is mostly surrounded by nature but is also leads through cities and villages rich in cultural heritage and values. There is a lot to discover and experience

in these communities along the road, while tourists can take a break in spas of Radenci and Banovci. While cycling mostly in the nature, good restaurants, bars, and shops are on the way from the start point to the end of the stage. There are 5 possible crossing between the northern and southern route, allowing various short detours or enjoying the view on river Mura.

4.1.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S1/1	Mureck, Austraße	Mureck, road B69 – R2 Murradweg 46.707846, 15.780202	1,05 km	municipality roads	gravel (partly asphalt)			***
S1/2	Mureck, road B69 – R2 Murradweg 46.707846, 15.780202	Mureck, road B69 – L214 intersection 46.707889, 15.781944	0,13 km	public road	asphalt	B69		***
S1/3	Mureck, road B69 – L214 intersection	Trate, Mura bridge 46.706525, 15.785753	0,37 km	public road	asphalt	L214, 433		***
S1/4	Trate, Mura bridge	Vratja Vas, east 46.707630, 15.804915	1,71 km	public road	asphalt	438		***
S1/5	Vratja Vas, east	Zgornje Konjišče, lakes 46.716845, 15.828169	2,48 km		asphalt			***
S1/6	Zgornje Konjišče, lakes	North of Žiberce 46.713527, 15.859213	2,98 km		gravel			**
S1/7	North of Žiberce	North of Črnci 46.710870, 15.893294	3,84 km		asphalt			***
S1/8	North of Črnci	Apače, west 46.698515, 15.903887	1,95 km		gravel			***
S1/9	Apače, west	Apače, north 46.700289, 15.909997	0,69 km	municipality roads	asphalt			***
S1/10	Apače, north	Segovci, north 46.697505, 15.916887	0,66 km	agricultural road	gravel			**
S1/11	Segovci, north	Segovci, northeast 46.698663, 15.923128	0,51 km	municipality roads	asphalt			***
S1/12	Segovci, northeast	Segovci, road 438, bus stops 46.693145, 15.922516	0,65 km		dirt			**
S1/13	Segovci, road 438,	Lutverci, west	1,25 km	public road	asphalt	438		***

	bus stops	46.690508, 15.938503						
S1/14	Lutverci, west	Podgrad, northeast 46.682899, 15.977952	3,5 km		grass			*
S1/15	Podgrad, northeast	Gornja Radgona, west 46.681196, 15.978992	0,24 km		dirt			**
S1/16	Gornja Radgona, west	Gornja Radgona, bridge 46.683309, 15.987111	0,85 km		asphalt			***
S1/17	Gornja Radgona, bridge	Gornja Radgona, start of gravel road 46.680288, 15.994400	0,66 km	public road, municipality roads	asphalt	230		***
S1/18	Gornja Radgona, start of gravel road	Gornja Radgona, Cesta na Stadion 46.674521, 15.994066	1,89 km		gravel,grass			*
S1/19	Gornja Radgona, Cesta na Stadion	Gornja Radgona, south roundabout 46.671951, 15.994448	0,33 km	municipality road, public road	asphalt	230		***
S1/20	Gornja Radgona, south roundabout	Mele, south 46.656416, 16.019580	2,75 km	bicycle path	asphalt			***
S1/21	Mele, south	Šratovci, west 46.654399, 16.022326	0,32 km	separated path	asphalt			***
S1/22	Šratovci, west	Šratovci, east 46.648366, 16.029529	0.91 km	public road	asphalt	230		***
S1/23	Šratovci, east	Radenci, west 46.646552, 16.032133	0,29 km	separated path	asphalt			***
S1/24	Radenci, west	Radenci, roundabout 46.641784, 16.040836	0,89 km	public road	asphalt	230		***
S1/25	Radenci, roundabout	Radenci, east 46.638062, 16.048617	0,77 km	shared pedestrian/bicycle path	asphalt			***
S1/26	Radenci, east	North of Rihtarovci-1 46.634122, 16.055125	0,74 km	separated path	asphalt			***
S1/27	North of Rihtarovci-1	North of Rihtarovci-2 46.632285, 16.056282	0,24 km	shared pedestrian/bicycle path	asphalt			***

S1/28	North of Rihtarovci-2	Turjanci, west 46.629564, 16.058940	0,39 km	separated path	asphalt			***
S1/29	Turjanci, west	Turjanci, east 46.627351, 16.066671	0,68 km	shared pedestrian/bicycle path	asphalt			***
S1/30	Turjanci, east	Hrastje-Mota, west 46.621872, 16.070879	0,71 km	separated path	asphalt			***
S1/31	Hrastje-Mota, west	Hrastje-Mota, east 46.613065, 16.082494	1,37 km	shared pedestrian/bicycle path	asphalt			***
S1/32	Hrastje-Mota, east	Vučja Vas, north 46.600461, 16.100924	2,16 km	separated path	asphalt			***
S1/33	Vučja Vas, north	Vučja Vas, detour intersection 46.598931, 16.101650	0,18 km	shared pedestrian/bicycle path	asphalt			***
S1/34	Vučja Vas, detour intersection	Vučja Vas, south 46.596298, 16.103080	0,33 km	shared pedestrian/bicycle path	asphalt			***
S1/35	Vučja Vas, south	Vučja Vas, end of settlement 46.595365, 16.105754	0,28 km	municipality road	asphalt			***
S1/36	Vučja Vas, end of settlement	A5 bridge-1, 46.598571, 16.117381	1,00 km		gravel			***
S1/37	A5 bridge-1,	A5 bridge-2 46.598451, 16.123050	0,46 km		asphalt			***
S1/38	A5 bridge-2	Start of embankment at A5 46.602593, 16.126149	0,62 km		gravel			***
S1/39	Start of embankment at A5	Veržej north, Mlinska cesta 46.588211, 16.165667	3,96 km	embankment	gravel			**
S1/40	Veržej north, Mlinska cesta	Veržej, sports field 46.589475, 16.166816	0,19 km		gravel			***
S1/41	Veržej, sports field	Veržej, road 439 46.587562, 16.172498	0,55 km	forest road	dirt			**
S1/42	Veržej, road 439	Veržej, Ulica Franja Kozarja – road 439 intersection 46.586371,	0,42 km	public road	asphalt	439		***

		16.167507						
S1/43	Veržej, Ulica Franja Kozarja – road 439 intersection	Veržej, south 46.578762, 16.165953	1,08 km	municipality roads	asphalt			***
S1/44	Veržej, south	Banovci, north 46.572550, 16.165820	0,76 km	bicycle path	asphalt			***
S1/45	Banovci, north	Banovci, intersection 46.571572, 16.166695	0,13 km	municipality road	asphalt			***
DETOURS								
S1/D1	Radenci, roundabout	Mura bridge Petanjci 46.649424, 16.050281	1,24 km	public road	asphalt	235		***
S1/D2-1	Vučja Vas, detour intersection	Vučja Vas, east 46.600307, 16.108272	0,55 km	municipality road	asphalt			***
S1/D2-2	Vučja Vas, east	Ferry, Krog 46.609946, 16.117222	1,93 km	forest road	gravel			**
S1/D3	Veržej, sports field	Babič mill, Veržej 46.592136, 16.166815	0,3 km		gravel			***
S1/D4	Veržej, road 439	Mura bridge, Veržej 46.588924, 16.178677	0,51 km	public road	asphalt	439		***

4. Table: Subsections of S1 stage

Mureck is the start point of the Amazon of Europe Bike Trail, the first section of the southern route starts here and ends in Banovci, Slovenia. The daily stage can be divided into three different sections. The western part (Trate- Gornja Radgona) dominantly goes on traffic free or very low traffic roads with a proportion of unpaved sub-sections. The middle part between Gornja Radgona and Vučja Vas contains roads only with asphalted surface, the trail follows the main road 230. The eastern part contains various surface sections: dirt roads including a longer embankment section, asphalt roads inside settlements and separated cycling paths as well.

After a few hundred meters on the left riverside of Mura, the trail crosses the river and turns left immediately after it enters Slovenia. The planned itinerary of the AoE bike trail follows the track of already existing and signposted bike routes (G-12) so it uses main road 438 until the eastern end of Vratja Vas settlement, that means 1,7 km of cycling on public road. After this left turn, the road remains asphalted for the next 2,5 kms, afterwards it becomes unpaved as it leaves behind the area of Zgornje Konjišče lakes. Apače is the next settlement that the route crosses, 8,8 kms of cycling on unpaved roads are required to reach it. Between Apače and Segovci the trail does not use the main road but an

agricultural road directly on the left side of Mlinski creek. It leaves Segovci in northeast direction then take a right turn and returns onto the main road 438, where the following 1,25 kms need to be completed until Lutverci. Between Lutverci and Gornja Radgona, cyclists can use grassy and dirt surfaces which could cause difficulties for trekking bicycles. Further improvement of certain parts of the route may be necessary, therefore minor corrections regarding the Segovci - Gornja Radgona section may occur in the future. Gornja Radgona is a perfect place with a plethora of services for resting and refilling supplies. At the south end of the settlement there is a forest park with educational path (46.669197, 16.003995) that is approachable very easily from the main route. Due to the lack of roads suitable for cycling closer to Mura river the route follows Mele- Šratovci- Radenci- Turjanci- Hrastje- Mota - Vučja Vas direction along the main road nr. 230. Within this 12-13 km long section, shared pedestrian/bicycle paths are available for cyclists inside many of these settlements, while there are separated and wide asphalted side roads between these settlements which keep slow vehicles (and cyclists) off the main road. Inside those settlements where there are no designated tracks for bicycles – Mele, Šratovci, part of Radenci - the parameters of pavements are favourable to be used by pedestrians and cyclists together, in a comfortable and safe way. A bicycle shop and repair service can be found in Radenci.



2-3. Figures: Pedestrian/bicycle path inside and seperated path for slow vehicles outside settlements between Radenci- and Vučja Vas

Source: Nina Lebar

There is a 2,5 km long detour from Vučja Vas that leads to the ferry (in Krog), while the main route leaves the road 230 and makes its way towards the Mura embankment – over A5 highway – on mostly dirt/gravel surface. The length of the embankment section is almost 4 km, ends north of Veržej then turns into the direction of the sport field. The riverbank and Babič mill (46.592136, 16.166815) are

quickly approachable from here on good quality gravel road, while the main track of the trail goes across the forest within the following half km and connects onto main road 439. Here, although car traffic might hinder cyclist comfort, cyclists have to spend only a short time (less than 0,5 km) on this road. Franja Kozarja, Grljanska and Trg Slavka Osterca streets are used by the trail to reach the roundabout inside Veržej. After 0,25 km on Banovska cesta, a two-way bicycle path starts which provides safe link for cyclists between Veržej and Banovci.



4-5.Figures: Gravel road to Babič Mill at Veržej (left); Mura bridge Petanjci-Radenci (right)
Source: Nina Lebar

4.1.4. Nature and river related values

River viewpoints:

- River viewpoint 1 – Bridge Mureck – Trate, 46.707007, 15.785344
- River viewpoint 2 - Bridge Gornja Radgona – Bad Radkersburg, 46.683804, 15.987137
- River viewpoint 3 - Bridge on Mura Petanjci, 46.649565, 16.050398
- River viewpoint 4 - Babič Mill on Mura, Veržej, 46.592300, 16.166629
- River viewpoint 5 - Bridge Veržej, 46.588894, 16.178484

Additional nature experience:

- Tourist and recreation centre Zgornje Konjišče and Father of the Pannonian oaks, Municipality of Apače - 46.717184, 15.822289
- The Negova lake, Municipality of Gornja Radgona - 46.595210, 15.962834
- Forest park Lisjakova struga, Municipality of Gornja Radgona - 46.669180, 16.004028
- Radgona vineyards, Municipality of Gornja Radgona
- Natural mineral water springs, Municipality of Radenci

- Gajševsko lake, Municipality of Križevci pri Ljutomeru - 46.533096, 16.120162
- River Ščavnica, Municipality of Križevci pri Ljutomeru
- “Mursko polje”, Municipality of Veržej

4.1.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all the Slovenian stages are the following:

- 13 large info boards with bike boxes (self-service repair kit) and bike stands. At least 3 of them will be large info boards which will be placed at the stage points.
- 185 signs (estimated number)

3 large info boards need to be installed at stage points. (Regarding stage S1 in Banovci – end point of the stage). Exact locations of these elements are still to be defined. Service bike boxes are necessary since some areas are without any bike repair service providers who would offer services on the spot. A bike box provides the stand and tools for repairing the bike. Bike boxes are planned on both sides of river Mura. Exact locations of these spots are not known yet.

The estimated number of the signposts for all Slovenian stages is 185, but the exact number will be known after finalisation of the official road signposting documentation.

1 large info board will be placed on the Austrian side:

- Mureck – Coordinates: 46.704679, 15.770654

4.2. S2 Banovci (SI) – Mursko Središće (HR)

4.2.1. Basic information

Start point of the daily stage: Banovci (Slovenia), intersection, coordinates: 46.571572, 16.166695

End point of the daily stage: Mursko Središće, wooden bell, Location: 46.516307, 16.434465

Length of the daily stage: 30,17 km (9,2 km – 30 % is unpaved)

Length of the detour(s): 5,05 km (3,07 km – 60 % is unpaved)



6. Figure: Map of stage S2, Banovci - Mursko Središće

Banovci is a small village south of Veržej. Although its population number is around 200 people, the settlement has a significant capacity of accommodations due to its thermal spa. Missing services are available within 2 kms range, in Veržej. There is a train station 1,5 km from Banovci which ensures connection with Murska Sobota, Ljutomer, Ormož. Carriage of bicycles is possible on the train.

Mursko Središće is a former mining town with related exhibitions, the summer season is the most important here in relation to river Mura. The most significant accommodation facilities regarding the daily stage are in and around Sveta Muri, not far from Mursko Središće. The hotel SPA Golfer only itself has over 350 beds. Numerous apartments and holiday houses are located in the immediate vicinity. In Mursko Središće, the number and capacity of accommodations is more modest (Pension Ilonka with 42 bed places), but the town offers numerous bars, restaurants, and other services for cyclists and other tourists.

4.2.2. Short summary of the stage

S2 is a shared stage between two countries: 16,6 km runs in Slovenia, 13,6 km belongs to Croatia, while detours mean additional 5 km in one way (4,4 km of it in Slovenia). Due to its length and well-balanced mixture of different type of roads the daily stage is accomplishable by cyclists in easy and comfortable way. There are many attractive experiences on this Slovenian section – rafting, rent a bike, relaxing next

to river Mura, trying out local food in some restaurants and visit a range natural and cultural heritage sites. This part offers relaxation in spas and direct connection with river Mura. From the bridge in Sveti Martin, the route closely follows the river, offering a nature close cycling experience.

4.2.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S2/1	Banovci, intersection 46.571572, 16.166695	Zgornje Kapje, chapel 46.561972, 16.197669	2,98 km	public road, municipality roads	asphalt			***
S2/2	Zgornje Kapje, chapel	Zgornje Kapje, north 46.566390, 16.200385	0,65 km	municipality roads	asphalt			***
S2/3	Zgornje Kapje, north	Dolnje Krapje, intersection to river viewpoint 46.566741, 16.207070	0,58 km		gravel			***
S2/4	Dolnje Krapje, intersection to river viewpoint	Dolnje Krapje, north 46.563218, 16.207778	0,47 km		gravel			***
S2/5	Dolnje Krapje, north	Intersection west of Gezove jame 46.554443, 16.215415	1,42 km		asphalt (partly gravel)			***
S2/6	Intersection west of Gezove jame	Mota, north 46.549980, 16.228449	1,55 km		gravel			***
S2/7	Mota, north	Mota, intersection to ferry 46.545739, 16.231353	0,76 km	public road, municipality roads	asphalt			***
S2/8	Mota, intersection to ferry	Road 726 intersection-1 46.527103, 16.275526	4,22 km	public road	asphalt			***
S2/9	Road 726 intersection-1	Road 726 intersection-2 46.528314, 16.275454	0,14 km	public road	asphalt	726		***
S2/10	Road 726 intersection-2	Šafarsko, north 46.520997, 16.284406	1,62 km		gravel			**
S2/11	Šafarsko, north	Šafarsko, road 231 intersection 46.519700, 16.284303	0,15 km	municipality road	asphalt			***

S2/12	Šafarsko, road 231 intersection	Border crossing point -Gibina 46.520049, 16.314504	2,05 km	public road	asphalt	231		***
S2/13	Border crossing point -Gibina	Sveti Martin na Muri, intersection of roads nr. 2003 and 2245 46.525034, 16.362479	4,12 km	public road	asphalt	2003		***
S2/14	Sveti Martin na Muri, intersection of roads nr. 2003 and 2245	Mura bridge (Hotiza) 46.534926, 16.360229	1,16 km	public road	asphalt	2245		***
S2/15	Mura bridge (Hotiza)	Žabnik 46.530473, 16.380588	1,70 km		gravel			***
S2/16	Žabnik	Hlapičina 46.522314, 16.402776	2,72 km	municipality roads	asphalt			***
S2/17	Hlapičina	Mursko Središće-west 46.519594, 16.424787	3,03 km		gravel			**
S2/18	Mursko Središće-west	Mursko Središće-west, start of asphalt 46.518901, 16.427667	0,24 km	municipality road	gravel			***
S2/19	Mursko Središće-west, start of asphalt	Mursko Središće, wooden bell 46.516307, 16.434465	0,61 km	municipality roads	asphalt			***
DETOURS								
S2/D1	Dolnje Krapje, intersection to river viewpoint	River viewpoint and ferry 46.579173, 16.205784	1,75 km		gravel			**
S2/D2	Mota, intersection to ferry	Mota, ferry 46.549596, 16.243514	1,32 km		gravel			***
S2/D3	Road 726 intersection-2	Mura bridge, Gornja Bistrica 46.538993, 16.273002	1,3 km		asphalt	726		***
S2/D4	Mura bridge (Hotiza) 46.534926, 16.360229	Border (Slovenia-Croatia)- Hotiza 46.540656, 16.358434	0,68 km	public road	asphalt	2245		***

5. Table: Subsections of S2 stage

The first 3 kms of the stage is public road with very low traffic, comfortable for cycling. There is a train station 1,5 km from Banovci which ensures connection with Murska Sobota, Ljutomer, Ormož. Carriage of bicycles is possible on the train. At the chapel of Zgornje Krapje, the trail has a left turn, then, after

another left turn it turns back to northern direction. It approaches the riverside area and goes through floodplain forests within the next 4 kms on variable surfaces between Zgornje Krapje and Mota, including the lakes halfway between the two villages with a camping and restaurant. In addition, there is a 1,75 km long detour (unpaved forest road) providing a possibility to get to the Mura river. The connection from the lakes to Mota starts as a gravel road, followed by 4,2 km asphalted surface which connects Mota with the main road nr. 726. This is also a low traffic section. The main road leads onto the other side of Mura river and create the connection to stage N2 of the AoE BT. The main route takes a right turn after 140 meters on road 726. This is a starting point of an unpaved section around the settlement of Razkrižje. As the trail reaches the village of Šafarsko, goes over the Ščavnica creek, north of the settlement. The area is attractive due to the Ivan's spring and the confluence spot of Mura and Ščavnica that can be found near to the trail. The route remains on main road nr. 231 from Šafarsko on, for the remaining distance in Slovenia.

The Croatian part of the stage basically consists of public and municipality roads with asphalted surface and very low, low, or moderate traffic levels, further unpaved gravel roads, especially where the trail leads close to the Mura river. Entering to Croatia at Gibina border crossing point, the trail cannot approach the river here, thus goes on public road nr. 2003, passes through numerous settlements (Čestijanec, Lapšina, Jurovec, Brezovec). This public road is not traffic free, but the traffic volume fits to the respective criterion of the methodology. In Sveti Martin na Muri, it turns to north (onto public road nr. 2245) and reaches the Mura bridge which leads further to the Hotiza border crossing point. The trail itinerary stays on the right side of the river.

The road from the bridge (between Hotiza and Sveti Martin na Muri) goes very near to the unspoilt Mura riverbank, its surface is not paved, but solid macadam in good quality that requires regular periodic maintenance. At the eastern end of this 1,7 km long sub-section, there is a river ferry, water mill and a restaurant (miller house), offering food and drink and an opportunity to have a rest. This is one of the river access points of the stage as well. After a 2,72 km long asphalted section between Marof and Hlapičina the trail returns to the immediate riverbank, that 3 km of unpaved road is rideable all along but requires regular periodic maintenance especially after high water or higher amount of rainfall. The stage ends in Mursko Središće, at the wooden bell which is located 0,5 km west of the Mura bridge.



7-8. Figures: Low traffic asphalt road near Razkrižje (left) and unpaved surface between Razkrižje – Šafarsko (right).

Source: Nina Lebar



9-10. Figures: Good quality gravel road on the riverside of Mura (left) and mill on the river (right), north of Marof

Source: Ádám Bolyós



11. Figure: Mura river at Mursko Središće

Source: Ádám Bolyós

4.2.4. Nature and river related values

River view and access points:

- **River viewpoint 1** - Gezove Jame, 46.555682, 16.220567
- **River viewpoint 2** - Mota, 46.549885, 16.242899
- **River viewpoint 3** - Bridge Gornja Bistrica, 46.539093, 16.272996
- **River viewpoint 4** - river ferry at Žabnik. Location: 46.531320, 16.379528
- **River viewpoint 5** - Skela Fusek near Mursko Središće. Location: 46.523506, 16.425774

Additional nature experience:

- Ljutomer park, Municipality of Ljutomer
- Jeruzalem, Municipality of Ljutomer - 46.476557, 16.187441
- „Babji Ložič“ forest reserve, Municipality of Ljutomer
- Ivan's spring, Municipality of Razkrižje
- Razkrižje corner, Municipality of Razkrižje - 46.523794, 16.302899
- River Ščavnica, Municipality of Razkrižje

4.2.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all Slovenian stages are the following:

- 13 large info boards with Bike Boxes (self-service repair kit) and bike racks
- 185 signs (estimated number)

3 large info boards need to be installed in stage points. (Regarding stage S2 in Banovci – start point of the stage). Exact locations of these elements are still to be defined. Service bike boxes are necessary since some areas are without any bike repair service providers who would offer services on the spot. A bike box provides the stand and tools for repairing the bike, they are planned to be placed on both sides of river Mura. Locations of these spots are still unknown.

In Međimurje County, 1 large info board (with bike stand option) is planned to be installed regarding stage S2 on the following location:

- Mursko Središće – Coordinates: 46.51635 16.43459

The estimated number of the signposts for all Slovenian stages is 185. In case of whole Međimurje County the number of locations is 187, but the number of the signs is 259, because of the need to signpost from both direction in several cases. They needed to put new pillars on 46 locations, in other cases they can use the already existing pillars for signposting. Exact information on number and locations of the signs regarding stage S2 will be known after finalisation of the official road signposting documentation.

4.3. S3 Mursko Središće (HR) - Donji Vidovec (HR)

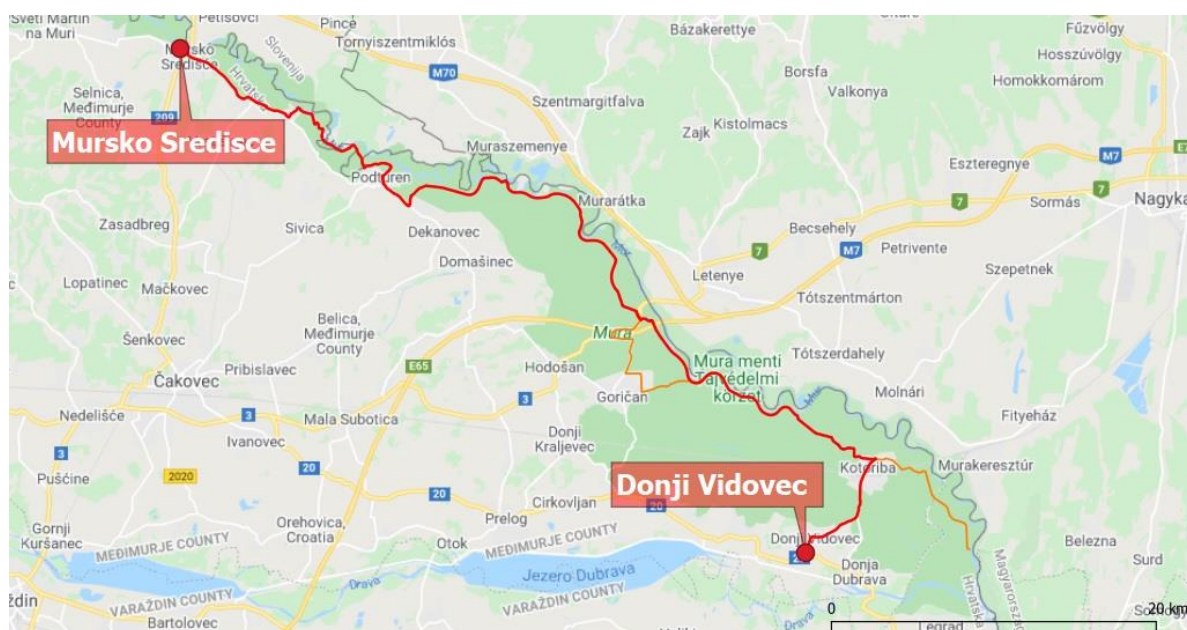
4.3.1. Basic information

Start point of the daily stage: Mursko Središće, wooden bell, coordinates: 46.516307, 16.434465

End point of the daily stage: Donji Vidovec (Croatia), Hotel Golf, coordinates: 46.322636, 16.781094

Length of the daily stage: 60,13 km (41,53 km - 69 % is unpaved)

Length of the detour(s): 6,57 km (5,6 km – 85 % is unpaved)



12. Figure: Map of stage S3, Mursko Središće - Donji Vidovec

Mursko Središće is a former mining town on Mura riverside, its great location makes it appropriate stage point. However, Sveti Martin is the most significant settlement of the area regarding accommodation possibilities, Hotel SPA Golfer only itself has over 350 beds. In Mursko Središće the number and capacity of accommodations is more modest, but the town offers numerous bars, restaurants, and other services for cyclists.

Donji Vidovec is a village located in the south-eastern part of Međimurje County close to the outflow canal from Lake Dubrava and the Drava river. The settlement has a hotel (Hotel Golf) and basic level of services to offer. Additional accommodations are available in Prelog.

4.3.2. Short summary of the stage

Daily stage S3 is a very nature close stage crossing the basins of Mura and Drava River in territory of the Međimurje County. The trail goes through the protected area of Regional Park Mura-Drava which is also a protected landscape of the Mura River. The stage starts in city centre of Mursko Središće and finishes in Donji Vidovec near the Pansion Golf facility located close to Drava River. Almost the entire route stays close to nature area which means on the other hand that significant part of the daily stage is on unpaved surface. The route uses unclassified roads on embankments or runs directly on the riverside

with negligible traffic or without any traffic at all. Quality level of these macadam roads are good in all weather conditions but appropriately equipped bicycles for that kind of surfaces are strongly recommended.

4.3.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S3/1	Mursko Središće, wooden bell, 46.516307, 16.434465	Križovec, crossroads with the small chapel 46.489757, 16.494439	5,89 km	public road	asphalt	2003		***
S3/2	Križovec, crossroad with the small chapel	Križovec, riverside 46.493767, 16.499545	0,62 km	municipality road	asphalt			***
S3/3	Križovec, riverside	Ferketinec, crossing point 46.477003, 16.523079	3,17 km		macadam			**
S3/4	Ferketinec, crossing point	Podturen, embankment-1 46.472049, 16.543850	3,72 km		macadam			***
S3/5	Podturen, embankment-1	Podturen, embankment-2 46.469020, 16.549557	1,36 km		dirt, gravel			**
S3/6	Podturen, embankment-2	Podturen, crossroads at the church 46.464682, 16.546623	0,91 km	municipality roads	asphalt			***
S3/7	Podturen, crossroads at the church	Crossroads near Novakovec 46.455961, 16.561097	2,17 km	public road	asphalt	2003		***
S3/8	Crossroads near Novakovec	Dekanovec, road to the riverbank-1 46.465177, 16.612394	7,2 km		gravel			**
S3/9	Dekanovec, road to the riverbank-1	Dekanovec, road to the riverbank-2 46.463153, 16.615355	0,78 km		dirt			**
S3/10	Dekanovec, road to the riverbank-2	End of the embankment 46.423449, 16.676667	11,79 km		gravel			**
S3/11	End of the embankment	Goričan border crossing -1	1,82 km		gravel			**

		46.412636, 16.689189						
S3/12	Goričan border crossing -1	Goričan border crossing -2 46.413472, 16.689544	0,1 km	public road	asphalt	D3		***
S3/13	Goričan border crossing -2	Restaurant Zelengaj 46.412296, 16.693873	0,36 km		asphalt			***
S3/14	Restaurant Zelengaj	Alternative route connection 46.392164, 16.727277	4,23 km		gravel			**
S3/15	Alternative route connection	Crossroads - Embankment road and road to Kotoriba 46.376183, 16.776010	4,8 km		gravel			***
S3/16	Crossroads - Embankment road and road to Kotoriba	Start of asphalt road near Kotoriba 46.367762, 16.795133	2,66 km		gravel			***
S3/17	Start of asphalt road near Kotoriba	Kotoriba 46.359635, 16.819921	2,59 km	public road	asphalt	20066		***
S3/18	Kotoriba	Donji Vidovec, Hotel Golf 46.322591, 16.780914	5,96 km	public roads	asphalt	20045, 2040		***
DETOURS								
S3/D1-1	Kotoriba	Kotoriba, end of settlement 46.357716, 16.830807	0,97 km	public road, municipality road	asphalt	20045		***
S3/D1-2	Kotoriba, end of settlement	Start of embankment, east of Kotoriba 46.354842, 16.846965	1,45 km		dirt			***
S3/D1-3	Start of embankment, east of Kotoriba	End of embankment, Veliki Pažut 46.325729, 16.869864	4,02 km	embankment	dirt			**
S3/D1-4	End of embankment, Veliki Pažut	Veliki Pažut, Mura river 46.325239, 16.871171	0,13 km		dirt			**
ALTERNATIVE ROUTE								
S3/A-1	Goričan border crossing -1	Start of the paved road in parallel to public road D3	0,23 km		gravel			***

		46.411045, 16.687492						
S3/A-2	Start of the paved road in parallel to public road D3	Crossroads- road nr. 2026 46.405507, 16.672923	2,36 km		asphalt			***
S3/A-3	Crossroads – road nr. 2026	Crossroads- road nr. 2026 (North of Goričan) 46.392267, 16.680686	3,6 km		asphalt			***
S3/A-4	Crossroads- road nr. 2026 (North of Goričan)	Crossroads – east of Goričan 46.385222, 16.689769	2,11 km	municipality road	asphalt			***
S3/A-5	Crossroads – east of Goričan	Alternative route connection 46.392164, 16.727277	3,2 km	public road	asphalt, gravel	20066		***

6. Table: Subsections of S3 stage

Between Mursko Središće and Križovec (via Peklenica) the route uses public road nr. 2003, despite of this road has certain amount of traffic it is used by cyclists on a regular basis. The trail turns to north direction at the small chapel in Križovec and reaches the direct riverside within the next km. The following 8,25 kms of the stage lead on unpaved surfaces in various quality. Wheel-tracks with grass surface between the tracks is the typical surface of the first few km's from Križovec. The size of crushed stones might be at some parts larger, and the quality of certain sub-sections is challenging here but the area with many lakes and the river compensate for the possible discomfort. The quality improves for the remaining section to Podturen which enables a more comfortable cycling – still on unpaved surface – after Ferketinec (46.477003, 16.523079). At Miklavec the route runs really close (within max. 100 meters) to the river for 2 km providing a continuous view on the Mura. As the route arrives at the embankment on the edge of Podturen, it takes a sharp turn back on the southern part of the embankment and uses the macadam road parallel to it for the next 680 meters. Then it crosses the embankment to its northern side and approaches the river through the floodplain forest and returns to Podturen later. The whole length of this curve is less than 1 km and fully justified due to the beautiful view of the river. The following 3 km is an asphalted section on municipality roads and public road nr. 2003, following a left turn at the church. Novakovec is the next settlement along the daily stage because the trail returns to the vicinity of Mura. Cyclists need to keep in mind that Podturen and Novakovec are the last places to purchase food or beverages ahead for a longer distance on the embankment without any settlements or services. The route between Novakovec and Goričan border crossing point can be divided into two sections, where the mid-point is a river viewpoint Dekanovec (46.465994, 16.614185). Both the Novakovac-Dekanovec and Dekanovec-Goričan sub-sections mean

longer distances (7,2 km and 11,8 km) to accomplish on macadam surface in parallel to the embankment. The general condition of this gravel road is not perfect but acceptable. Since the road consists of larger sized crushed stones in some parts, it requires appropriate bicycles and tyres to cycle on it for a longer distance. Due to the Goričan border crossing point the trail leaves the embankment for a while, which is an opportunity for cyclists to refresh: shop, bar, restaurants can be found nearby. Then the route returns next to the embankment for 9 km towards Kotoriba, the surface is still gravel. Until the construction of the bridge over Trnava creek is finished, there is an alternative route that should be followed via Goričan. When the trail leaves the embankment, the road remains unpaved for further 2,6 km then turns into an asphalted road for the last few km's before Kotoriba. There is a train station in Kotoriba and bicycle carriage is possible on the trains so cyclists can reach Čakovec, Varaždin or Mursko Središće (with one change via Čakovec). Besides trains, it is possible to use “shuttle” services from “Rudi ekspres” company with vans or bus with trailer. Cyclists have two options where to go from Kotoriba: directly to Donji Vidovec or towards Veliki Pažut. The latter one is the only detour of the daily stage, leading in parallel to the river flow to a riverview point. Its total length is 6,5 km in one way, dominantly on unpaved surface including a 4 km long embankment section. The last section of the main route at this daily stage is a good quality public road (nr. 2040) between Kotoriba and Donji Vidovec, there is no designated bicycle lane, but the road is wide enough to ensure safe coexistence of cyclists and motorized vehicles for the remaining 6 km.



13-14. Figures: Designated gravel road between Ferketinec and Podturen

Source: Ádám Bolyós



15. Figure: Dirt surface inside the floodplain forest area, Podturen.



16. Figure: Gravel road parallel to the Mura embankment, typical element of stage S3

4.3.4. Nature and river related values

River view and access points:

As the route basically runs very close to the river in this section, there are numerous points along it where the river is visible or accessible with a short detour. The following places can be highlighted as river viewpoints and resting places at the same time:

- **River viewpoint 1** - promenade in Mursko Središće. Location: 46.514459, 16.439004
- **River viewpoint 2** – Podturen. Location: 46.471992, 16.550216
- **River viewpoint 3** – Dekanovec. Location: 46.465994, 16.614185

Furthermore, we can also find appropriate locations for a break (equipped with benches) near to Križovec, Ferketinec / Miklavec, Novakovec, Domašinec, Goričan and Kotoriba. Swimming in the Mura

river is not recommended here, because of the speed of water flow, especially near the river bends where vortex can easily occur.

Additional nature experience:

The greater part of route S3 goes along the area of Regional Park Mura-Drava. Along the route, there is an educational center –Public institution for nature protection in Križovec. Downstream the river Mura, the route goes through the humid habitat called Murščak along forest roads and hunting ways and there is an educational path Murščak near Domašinec. In Donji Vidovec, there is the tree presenting a monument of nature – Lucerne Oak in front of St. Vids church.

4.3.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all the stages in Međimurje County are the following:

- 2 resting places with benches and with bike stand;
- 3 large info boards with bike stand;
- 2 small info boards with bike stand

The number of locations where the signposts be placed in the whole county is 187, but the number of the signs is 259 because of the need to signpost from both direction in several cases. They have to put new pillars on 46 locations, in other cases they can use the already existing pillars for signposting. In case of the temporary alternative route because of the Trnava bridge construction – via Goričan – signposts will not be placed. There are many of already existing resting places in the county, most of the new infrastructure elements excluding road signs – 2 large info boards, 2 small info boards, 1 resting place – will be installed regarding S3 stage.

Locations of planned large info boards regarding stage S3:

- Mursko Središće – Coordinates: 46.51635 16.43459
- Donji Vidovec – Coordinates: 46.32241 16.78131

Locations of planned small info boards: regarding stage S3:

- Dekanovec – Coordinates: 46.46581 16.61411
- Kotoriba – Coordinates: 46.366490, 16.796070

Location of planned resting place regarding stage S3:

- Veliki Pažut (Novi Zrin) – with benches & bikestand option 2 & repair stand. Coordinates: 46.32527 16.87102

4.4. S4 Donji Vidovec (HR) – Varaždin (HR)

4.4.1. Basic information

Start point of the daily stage: Donji Vidovec (Croatia), Hotel Golf. Coordinates: 46.322636, 16.781094

End point of the daily stage: Varaždin, Međimurska ulica (northeast Varaždin). Coordinates: 46.317521, 16.354394

Length of the daily stage: 42,89 km (16,44 km - 38 % is unpaved)

Length of the detour(s): 5,88 km (3,87 km - 66 % is unpaved)



17. Figure: Map of stage S4, Donji Vidovec - Varaždin

Donji Vidovec is a small settlement north of the Drava river and the Drava canal. It has a hotel (Hotel Golf) and basic level of services to offer.

Varaždin is a city very close to Drava river with a population of more than 45 000, being the centre of Varaždin County. Due to its wide offer of accommodations and other services – including bicycle related services – and favourable public transport connections it is fully suited to be a stage point of the Amazon of Europe Bike Trail.

4.4.2. Short summary of the stage

S4 stage runs along the north side of Drava river next to two reservoirs – Lake Dubrava and Lake Varaždin. Besides a low share of asphalted roads, the stage contains a considerable amount of unpaved sections as well (16,44 km; 38 %) and partly follows already existing bike routes in the region (Drava route R1; R3 CIAN, state bike road DG6). The daily stage shows many riverside areas, it fulfils both the rideability and safety criteria of the methodology and its length -including the detour – can be easily completed in one day.

4.4.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S4/1	Donji Vidovec, Hotel Golf 46.322636, 16.781094	Donji Mihaljevec 46.336640, 16.710711	6,52 km	public road	asphalt	D20		***
S4/2	Donji Mihaljevec	Oporovec, east 46.327791, 16.684045	2,55 km	unclassified roads	gravel			*
S4/3	Oporovec, east	Oporovec, west 46.328883, 16.670448	1,19 km	municipality roads	asphalt			***
S4/4	Oporovec, west	Prelog, east 46.334135, 16.626966	3,66 km	unclassified road	gravel			**
S4/5	Prelog, east	Prelog, crossroads Glavna ul. and Sajmišna ul. 46.337117, 16.614284	1,09 km	municipality roads, shared bicycle/pedestrian path	asphalt			***
S4/6	Prelog, crossroads Glavna ul. and Sajmišna ul.	Prelog, south 46.324485, 16.615536	1,45 km	shared bicycle/pedestrian path	asphalt			**
S4/7	Prelog, south	Crossroads: road 20039 and road to Otok 46.322585, 16.590287	2 km	public road	asphalt	20039		***
S4/8	Crossroads: road 20039 and road to Otok	Vularija, Zrinskih street 46.324537, 16.480052	10,78 km	public roads, municipality roads	asphalt	2033, 2055, 20037		***
S4/9	Vularija, Zrinskih street	Crossroads of road to Vularija and road nr. 2022 46.310752, 16.485215	1,63 km	unclassified road	gravel			*
S4/10	Crossroads of road to Vularija and road nr. 2022	Road crossing north of the embankment 46.310254, 16.473982	0,95 km	public road	asphalt	2022		***
S4/11	Road crossing north of the embankment	End of embankment, south of Gornji Kuršanec 46.329095, 16.372142	8,6 km		gravel			***
S4/12	End of embankment,	D3 crossing in	1,25 km	municipality	asphalt	2020		***

	south of Gornji Kuršanec	Gornji Kuršanec 46.329576, 16.359977		roads, public road				
S4/13	D3 crossing in Gornji Kuršanec	South end of the Drava bridge at Varaždin 46.319113, 16.355929	1,22 km	bicycle lane	asphalt	D3		***
DETOUR								
S4/D1-1	D3 crossing in Gornji Kuršanec	Pušćine 46.346203, 16.361589	1,87 km	bicycle lane	asphalt	D3		***
S4/D1-2	Pušćine	Pušćine, end of the settlement 46.346308, 16.359643	0,14 km	municipality road	asphalt			***
S4/D1-3	Pušćine, end of the settlement	Drava river access 46.359727, 16.327066	3,87 km	unclassified road	gravel, dirt			**

7. Table: Subsections of S4 stage

The daily stages S4 and S5 has a common 18,5 km between Donji Vidovec and Otok. From Donji Vidovec to Donji Mihaljevec (via Sveta Marija) the trail goes on public road D20 for 6,5 km which is a main road thus cyclists can expect vehicles during cycling on this part, but traffic volume does not exceed the acceptable level. Next to the football field in Donji Mihaljevec the route turns left and goes 2,5 km on poor quality gravel road to the eastern end of Oporovec settlement. This section is the most challenging to ride in the whole daily stage, at the same time it brings cyclists very close to the Dubrava lake (a reservoir on Drava) which is 100-200 meters from the trail at that point. After a short, asphalted section inside the settlement of Oporovec, the connection with Prelog is unpaved again but the quality of the gravel road is better than the previous one. Prelog is a city with almost 8000 inhabitants, cyclists can find shops, restaurants, and other services here. Inside Prelog, the route uses Ulica Kalmana Mesarića and Glavna ulica then turns left at Hotel Prelog in the city centre. Sajmišna ulica - Trg Bana Jelačića - Zrinskih ulica is the direction to follow before a right turn onto road nr. 20039 at the KTC shopping center. Tourists can cycle separately from motorized traffic since there are shared pedestrian bicycle paths almost in the entire length of the planned AoE BT inside Prelog. Drava river is again visible within the following section, but road 20039 has considerable traffic. Fortunately, the parallel embankment with a gravel/grassy surface is also a possibility for cyclists who are uncomfortable with the level of car traffic. The trail turns north into the direction of Otok in the next intersection, this is the point where stages S4 and S5 meet. The route follows roads nr. 2033, 2055 and 20037 and goes through the villages of Otok, Podbrest, Orehovica and Vularija. These roads are without any cycling infrastructures, but they have low traffic roads with 500-2000 vehicles per day and speed limits 50-70 km/h which fits the common AoE BT methodology. From Vularija (Zrinskih u) onwards, the route comes back to the side of

Drava canal on a gravel road, which 1,68 km is among the most challenging sub-sections from the perspective of surface quality. After 1 km on public road nr. 2020, the trail reaches the northern side of Lake Varaždin which is the start point of a very long (8,7 km) gravel section along the reservoir. The remaining part of the daily stage is paved from there onwards, the route goes up north on Zrinskih ulica in Gornji Kuršanec then turns left onto Ulica bana Jelačića, passes over the railway, then turns left again at the church (Trg Mirka Blazinarića). After a right turn, the trail arrives at D3 main road (46.329576, 16.359977) which is an intersection of the main route (to the left) and the only detour (to the right) on this stage. Main road D3 is the one with the heaviest traffic of this stage, Pušćine-Varaždin section is with over 10 000 vehicles per day and speed limit is 60km/h, but there are painted bicycle lanes in both directions. The total length of detour to Drava riverside is 5,9 km (in one way) contains 3,87 km of unpaved roads. The first part of the detour follows state cycling road DG6 until Pušćine where it goes off road to the nearest resting place near Drava in Hraščan forest. That part of the detour which runs directly on the riverside is often flooded but mainly not by the time of the cycling season. Quality of the offroad section can be unstable in unfavourable weather conditions, but it can be considered as basically rideable.

The main route passes over Drava river south of Gornji Kuršanec, bicycle lanes in both directions raise safety level of cyclists.



18. Figure: Drava canal and road alongside

4.4.4. Nature and river related values

River view and access points:

Since numerous sections of the route go directly on the riverside/lakeshore which ensure continuous view of the waters.

- River viewpoint 1 - Marine Prelog. Location: 46.323986, 16.604772

- River viewpoint 2 - Drava river access, Gornji Hrašćan. Location: 46.359727, 16.327066
- River viewpoint 3 – Drava bride, Varaždin. Location: 46.322163, 16.358122

Additional nature experience:

Lake Dubrava with its 17 km² it is the third largest Lake in Croatia, and it is the largest Lake on the Drava River. In addition, the large water surface is suitable for water sports (sailing, kayaking, canoeing) there are number of hidden places suitable for fishing, but also for swimming. Access to water and swimming along the main part of the lakes is forbidden, but it is possible in Drava river after/before the lakes where the suitable environment has been established (Sveta Marija). When bikers want to rest, they cannot do it near water, but only in inhabited places or at resting places with required infrastructure.

4.4.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to the plans, the new infrastructure elements for all the stages in Međimurje County are the following:

- 2 resting places with benches and with bike stand;
- 3 large info boards with bike stand;
- 2 small info boards with bike stand will be placed along the route in Međimurje County.

The number of locations where the signposts be placed in the whole county is 187, but the number of the signs is 259 because of the need to signpost from both direction in several cases. They need to put new pillars on 46 locations, in other cases they can use the already existing pillars for signposting.

There are two already existing bike resting places along the route (Prelog, Otok) equipped with info board, a basic bicycle service tool, a pump and a USB charger for mobile and navigation devices. On the Varaždin side near the bridge, there is a resting place with an info board. Besides direction signs, a new resting place with benches and bike stand (option 2), and two large info boards are planned to be installed regarding S4 stage.

Location of the planned two large info boards:

- Međimurje County: Donji Vidovec (start point) – at Hotel Golf (start point)- Coordinates: 46.322558 16.779784.
- Varaždin County: Varaždin - Coordinates: 46.317451, 16.354284. It is not covered by project budget, planned to be financed by own sources.

Location of the planned resting place:

- riverside near Gornji Hrašćan – Coordinates: 46.36002 16.32677

4.5. S5 Varaždin (HR) – Prelog (HR)

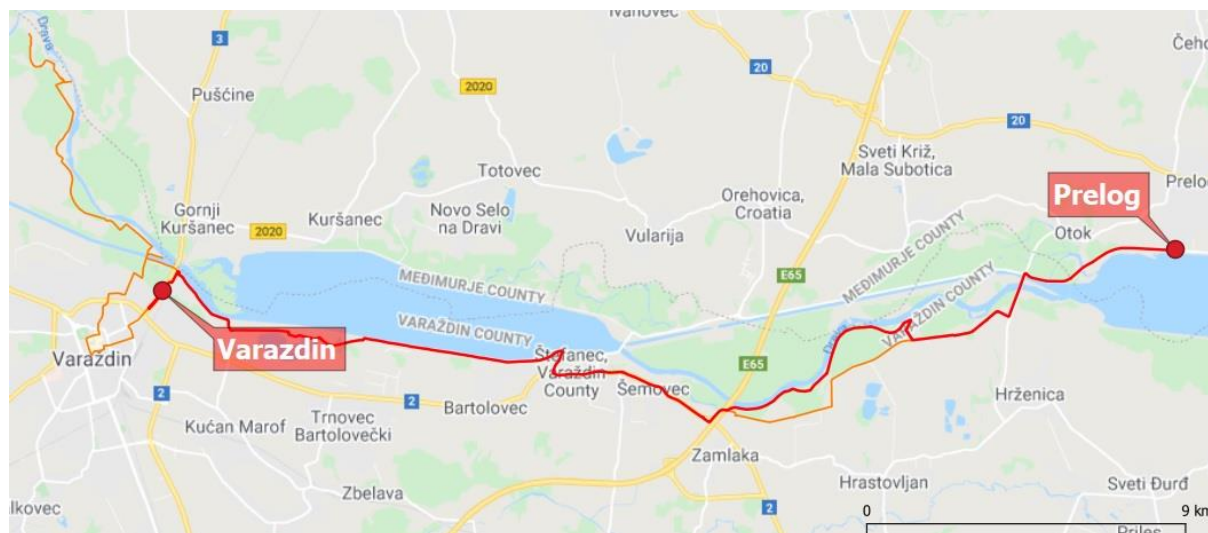
4.5.1. Basic information

Start point of the daily stage: Varaždin, Međimurska ulica (northeast Varaždin). Coordinates: 46.317521, 16.354394

End point of the daily stage: Prelog, Marina. Coordinates: 46.323575, 16.605011

Length of the daily stage: 24,34 km (13,68 km – 56 % is unpaved)

Length of detour(s): 12,43 km (8,28 km – 66 % is unpaved)



19. Figure: Map of S5 stage, Varaždin - Prelog

Varaždin is a city very close to Drava river with a population of more than 45 000, being the centre of Varaždin County. Due to its wide offer of accommodations and other services – including bicycle related services – and favourable public transport connections it is fully suited to be a stage point of the Amazon of Europe Bike Trail.

Prelog is part of S4 stage but start/end point of S5 stage. The city is situated on the north side of Lake Dubrava which is a reservoir on Drava river. The city has hotels, shops, bakeries, café bars, bicycle shop, therefore it is suited to be a stage point of the trail. Additional bed-places can be found in Hotel Golf (Donji Vidovec) which is 15 km from Prelog.

4.5.2. Short summary of the stage

The route was defined considering safety and nature attraction aspects at the same time. Most of the stage is traffic-free or passes on roads where quantity of motorized vehicles is up to 500 per day and the speed limit is up to 50 km/h. The route closely follows river Drava all along the stage and runs on the lakesides of Varaždin and Dubrava lakes. Because of the shorter total length of the main route, all detours within this stage can be easily included in a daily itinerary of an average cyclist. Detours

provide possibility to explore charming nature sites north of Varaždin along river Drava, as well as cultural values of the city of Varaždin by bicycle.

4.5.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S5/1	Varaždin, Međimurska ulica 46.317521, 16.354394	Varaždin, railway bridge, 46.320969, 16.358337	1,40 km		asphalt			***
S5/2	Varaždin, railway bridge	Recycling Yard Varaždin 46.311720, 16.371103	1,43 km		gravel			**
S5/3	Recycling Yard Varaždin	Motičnjak lake 46.310331, 16.386457	1,27 km		asphalt			***
S5/4	Motičnjak lake	Aquacity 46.309337, 16.394199	0,68 km		gravel			***
S5/5	Aquacity	North of Trnovec 46.308876, 16.405340	0,92 km		asphalt			***
S5/6	North of Trnovec	Štefanec north 46.306974, 16.455883	4,04 km		gravel			**
S5/7	Štefanec north	Štefanec, road D2 intersection 46.303120, 16.453424	0,16 km	municipality road	asphalt			***
S5/8	Štefanec, road D2 intersection	End of bicycle lane 46.295696, 16.490537	3,13 km	bicycle lane	asphalt	D2		***
S5/9	End of bicycle lane	D2 bridge over A4 highway 46.295340, 16.491708	0,06 km	public road	asphalt	D2		***
S5/10	D2 bridge over A4 highway	Start of gravel surface near A4 highway 46.294515, 16.493049	0,13 km		asphalt			***
S5/11	Start of gravel surface near A4 highway	Main route, alternative route intersection-1 46.296583, 16.497474	0,43 km		gravel			**
S5/12	Main route, alternative route intersection-1	Main route, alternative route intersection-2 46.308839,	5,02 km	forest roads	gravel			**

		16.544509						
S5/13	Main route, alternative route-2	Road nr. 2033 intersection, north of Hrženica 46.312985, 16.569086	2,08 km		gravel			**
S5/9	Road nr. 2033 intersection, north of Hrženica	Intersection of roads nr. 2033 and 20039 (roundabout) 46.320483, 16.573105	0,91 km	public road	asphalt	2033		***
S5/10	Intersection of roads nr. 2033 and 20039 (roundabout)	Prelog, Marina 46.323575, 16.605011	2,68 km	public road	asphalt	20039		***
DETOURS								
S5/D1-1	Međimurska ulica 46.314473, 16.350825	Varaždin, intersection of Ul. Julija Merlića - Ul. Petra Krešimira IV 46.309384, 16.347004	0,78 km	bicycle lane (pedestrian/bicycle path - partly)	asphalt			***
S5/D1-2	Varaždin, intersection of Ul. Julija Merlića - Ul. Petra Krešimira IV	Varaždin, intersection of Ul. Petra Krešimira IV - Ul. Petra Preradovića 46.307944, 16.340837	0,49 km	pedestrian/bicycle path	asphalt			***
S5/D1-3	Varaždin, intersection of Ul. Petra Krešimira IV - Ul. Petra Preradovića	Varaždin, old town south 46.306264, 16.336430	0,49 km	municipality roads	asphalt,			***
S5/D1-4	Varaždin, old town south	Varaždin, intersection of Bakačeva ul. - Ul. Augusta Šenoa 46.309862, 16.338476	0,64 km	municipality roads	stone cubes (partly gravel)			***
S5/D1-5	Varaždin, intersection of Bakačeva ul. - Ul. Augusta Šenoa	Varaždin, intersection of Dravska ul. – Bombellesova cesta 46.320632, 16.347186	1,67 km	municipality roads	asphalt			***
S5/D1-6	Varaždin, intersection of Dravska ul. – Bombellesova cesta	Varaždin, intersection of Vukovarska ul. – Bombellesova cesta 46.319638, 16.349293	0,19 km	pedestrian/bicycle path	asphalt			***
S5/D1-	Varaždin,	Varaždin, bridge	0,41 km		gravel			***

7	intersection of Vukovarska ul. – Bombellesova cesta	north of Drava forest 46.323219, 16.350379						
S5/D2-1	Varaždin, railway bridge, 46.320969, 16.358337	Varaždin, bridge north of Drava forest 46.323219, 16.350379	0,67 km		gravel			***
S5/D2-2	Varaždin, bridge north of Drava forest	Rafting club 46.324025, 16.350712	0,09 km					***
S5/D2-3	Rafting club	Trg Pavla Štoosa 46.329722, 16.340190	1,35 km		gravel			**
S5/D2-3a	Rafting club	River viewpoint – confluence 46.323277, 16.354416	0,29 km		gravel			**
S5/D2-4	Trg Pavla Štoosa	Mid-point 46.340075, 16.328849	1,63 km	embankment	gravel			***
S5/D2-5	Mid-point	Intersection to stop over area 46.354651, 16.328693	2,03 km		dirt			**
S5/D2-6a	Intersection to stop over area	"Cirkovečka" stop over 46.354348, 16.331182	0,26 km		dirt			**
S5/D2-6	Intersection to stop over area	End of detour 46.362470, 16.320662	1,44 km		dirt			**
ALTERNATIVE ROUTE								
S5/A1	Main route, alternative route crossing point-1 46.296583, 16.497474	Main route, alternative route crossing point-2 46.308839, 16.544509	4,49 km		gravel			**

8. Table: Subsections of S5 stage

The main route runs along the south side of Lake Varaždin reservoir. Međimurska ulica – where the stage starts – is a road with two (somewhere three) lanes and heavy traffic in both directions thus cyclists need to pay attention to safe road crossing. The closest crossing possibility for pedestrians can be found almost 0,5 km southwest from the starting point. The route runs along the bank of the Drava river, it passes under the bridge towards Jelačićka forest and “Arena” sports hall. The main character of the landscape is gradually changing from river to lake. Cyclotourists arrive at “Aquacity” sports and recreation centre within 3 kilometres which is situated at the side of Lake Motičnjak, offering sport, relax, swimming possibilities and a restaurant. The distance between the reservoir and Lake Motičnjak is only 250 meters. Leaving the “Aquacity” complex behind on asphalted road, cyclists reach a macadam

road within the next km, which runs along the derivation channel, next to the embankment. There is an asphalt road on the top of the embankment all along the south side of Lake Varaždin, but the trail uses the unpaved road parallel to it. Going up to the top of the embankment is possible in every km within the following 4km stretch. The trail leaves the embankment at Štefanec and turns onto the busiest road (D2) of the stage. Although cyclists need to use this road together with motorized traffic for the next 3 kms, it runs mainly inside settlements, and the painted bicycle lanes make this section safer. The route passes under the highway bridge and enters the floodplain forest area which is the starting point of a 7 km long unpaved section. As 5 out of 7 kms run very close to Drava, it enhances the “amazon” feelings of the cyclists. Forest roads on the riverside allow frequent panoramic views of the Drava river, before the trail returns onto the asphalted surface north of Hrženica. Designation of an alternative route also going to happen in order to bypass this area when the main route is not rideable by bicycle. The last 3,6 km of the stage need to be completed on asphalted public roads with moderate or low traffic to Prelog.

Besides 4,5 km alternative route, the stage includes 12,43 km detours inside and around the city of Varaždin. Two different types of additional routes can be described. A circle goes through the centre of the city, offering its rich cultural heritage, while the other extension is focusing on the nature sites of the riverside area northwest of Varaždin. The latter one starts at the main entrance of Drava forest park and leads to the pedestrian / bicycle bridge over the derivation channel. On the other side of the river, “Drava apex” site is a newly renovated Drava baths complex, consisting of several pools, a catering facility, offering food and drink and plenty places for sunbathing and recreation activities.



20. Figure: Drava bath complex at “Drava apex” site

Source: <https://varazdinski.rtl.hr/galerije/dogadjaji/2688127/dravski-bazeni/?slika=2699391>

The trail goes further to an educational path where visitors can find already installed information boards, helping them to gather information about Drava river. There is a local gathering place offering nice river views, this is the starting point of a 1,63 km long embankment section at the same time. As

the route leaves the embankment, additional 2 km need to be completed through the forest to reach an intersection, visitors can get to the riverbank from here. This site is called "Cirkovečka", traditionally used by locals for generations, ideal place for recreational activities (swimming, sunbathing, picnics). The end of the detour is a birdwatching point which is located 2,1 km north of "Cirkovečka" on the riverside. It is not always approachable by bicycle thus a few hundred meters walk may be necessary to reach it. Regard to the shorter total length of the main route in this stage, this detour can be easily included in a daily itinerary. However, these roads are 100% unpaved, some sections are less comfortable to cycle on therefore usage of appropriate bicycles and tyres are strongly recommended.



21-22. Figures: Bird watching point „Green Ponds“ (left) and site is called “Cirkovečka”(right) northwest of Varaždin
 Source: <https://varazdinski.rtl.hr/galerije/dogadjaji/2688127/dravski-bazeni/?slika=2699391>

4.5.4. Nature and river related values

River viewpoints:

- **River viewpoint 1** - “Dravska apex” 46.32342180, 16.35435160
- **River viewpoint 2** - 46.33834536, 16.33143713
- **River viewpoint 3** - 46.34666540, 16.33119465
- **River viewpoint 4** - “Cirkovecka” 46.35434712, 16.33118098
- **River viewpoint 5** - bird watching point “Green Ponds” 46.365466, 16.318695
- **River viewpoint 6** - north of Štefanec 46.30725689, 16.45593229
- **River viewpoint 7** – near highway bridge 46.29708155, 16.49976910
- **River viewpoint 8** - 46.29752959, 16.50769514
- **River viewpoint 9** - 46.30143304, 16.52067624
- **River viewpoint 10** -46.31023056, 16.52726271
- **River viewpoint 11** - 46.31251114, 16.54338646
- **River viewpoint 12** - Drava bridge north of Hrženica 46.318487, 16.572060
- **River viewpoint 13** – Prelog, Marina 46.323575, 16.605011

Additional nature experience:

- Drava educational trail, information boards with thematic elements (Location: 46.328958, 16.345595)
- More Adventure tourist agency is providing 4x4, rafting, SUP, kayak, and bike guided tours in all Varaždin county amazon of Europe area.
- The newly arranged educational trail is located within the Drava park forest not far from the site of the “Drava Baths” area. The educational path is developed by the Public institution "Nature of Varaždin county".
- Additional bird watching points along the trail (Locations: 46.29752959 16.50769514: 46.30143304 16.52067624; 46.31023056 16.52726271; 46.31251114 16.54338646.

4.5.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

Since the costs of new elements in Varaždin County are not covered by project budget, all of them needed be financed by own funds. According to plans, new AoE BT infrastructure elements regarding stage S5 are the following:

- 2 large info boards
- 5 small info boards
- 2 resting places

Locations of planned large info boards regarding stage S5:

- Varaždin County: Varaždin - Coordinates: 46.317451, 16.354284. It is not covered by project budget, planned to be financed by own funds.
- Međimurje County: Prelog – Marina (end point point)- Coordinates: 46.323575, 16.605011

Locations of planned resting places regarding stage S5:

- Drava riverside, north of Varaždin. Coordinates: 46.331299, 16.338102

The exact locations of one resting place and small info boards are not defined yet.

4.6. S6 Prelog (HR) – Koprivnica (HR)

4.6.1. Basic information

Start point of the daily stage: Prelog, Marina. Coordinates: 46.323575, 16.605011

End point of the daily stage: Koprivnica, Gymnasium 'Fran Galović'. Coordinates: 46.162356, 16.841724

Length of the daily stage: 56,43 km (13,46 km – 24 % is unpaved)

Length of the detour(s): 6,98 km (4,47 km – 64 % is unpaved)



23. Figure: Map of S6 stage, Prelog - Koprivnica

Prelog is a city on the north side of Lake Dubrava which is a reservoir on Drava river. The city has hotels, shops, bakeries, café bars, bicycle shop which make it suitable to be a stage point of the trail. Additional bed-places can be found in Hotel Golf (Donji Vidovec) which is 15 km from Prelog.

Koprivnica is the administrative centre of Koprivnica-Križevci County which is located 10-15 km from Drava river. The bike friendly city has rich cultural and gastronomic offer including many restaurants and different types of accommodations. Numerous bicycle shops provide the necessary services for cyclists, but bike repair kits are also available in the city.

4.6.2. Short summary of the stage

Two thirds of the total length of the daily stage belong to Koprivnica Križevci County while the remaining is part of Međimurje County. Majority of the main route (76 %) consists of public roads with asphalted surface, but some sections are unpaved. There are some subsections with unfavourable traffic conditions, but it never exceeds the unacceptable limit. Cyclists can visit many viewpoints of Drava

within this daily stage, including the confluence of Mura and Drava and numerous beautiful lakes near the river. Besides natural attractions, the stage offers various possibilities to enjoy cultural heritage of the area. The two stage points offer multiple number of bicycle shops, accommodations, restaurants, and other services for cyclists.

4.6.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S6/1	Prelog, Marina 46.323575, 16.605011	Prelog, Zrinskih ul. intersection 46.324468, 16.615580	0,79 km	public road	asphalt	20039		***
S6/2	Prelog, Zrinskih ul. intersection	Prelog, intersection Glavna ul. and Sajmišna ul. 46.337117, 16.614284	1,45 km	shared bicycle/pedestrian path	asphalt			**
S6/3	Prelog, intersection Glavna ul. and Sajmišna ul.	Prelog, east 46.334135, 16.626966	1,09 km	municipality roads, shared bicycle/pedestrian path	asphalt			***
S6/4	Prelog, east	Oporovec west 46.328883, 16.670448	3,66 km		gravel			**
S6/5	Oporovec west	Oporovec, east 46.327791, 16.684045	1,19 km	municipality roads	asphalt			***
S6/6	Oporovec, east	Donji Mihaljevec 46.336640, 16.710711	2,55 km		gravel			*
S6/7	Donji Mihaljevec	Donji Vidovec, Hotel Golf 46.322627, 16.780958	6,52 km	public road	asphalt	D20		***
S6/8	Donji Vidovec, Hotel Golf	Bridge, south of Donji Vidovec 46.314733, 16.780273	1,09 km		asphalt			***
S6/9	Bridge, south of Donji Vidovec	Donja Dubrava, riverside 46.312567, 16.804430	2,14 km		gravel			**
S6/10	Donja Dubrava, riverside	Crossroads of road D20 and gravel road to Legrad 46.293807, 16.829825	4,13 km	public roads	asphalt	20039 and D20		***
S6/11	Crossroads of road	Legrad, west	1,05 km		gravel			*

	D20 and gravel road to Legrad	46.292627, 16.843201						
S6/12	Legrad, west	Legrad, public road nr. 2078 crossroads 46.294207, 16.849637	0,61 km	municipality roads	asphalt			***
S6/13	Legrad, public road nr. 2078 crossroads	Crossroads of road nr. 2078 and D20 46.283558, 16.837648	1,6 km	public road	asphalt	2078		***
S6/14	Crossroads of road nr. 2078 and D20	Crossroads of D20 and road nr. 2081 46.284018, 16.835174	0,19 km	public road	asphalt	D20		***
S6/15	Crossroads of D20 and road nr. 2081	Mali Otok, south 46.270677, 16.823978	1,86 km	public road	asphalt	2081		***
S6/16	Mali Otok south	Imbriovec, north 46.260907, 16.821238	1,16 km		gravel			**
S6/17	Imbriovec, north	Imbriovec centre 46.255830, 16.821346	0,65 km	public road	asphalt	26001		***
S6/18	Imbriovec, centre	Đelekovec, crossroads of Ul. Ul. Mihovila Pavleka Miškine and Drvaska ul. 46.248488, 16.867643	4,13 km	public road	asphalt	2082, 2260		***
S6/19	Đelekovec, crossroads of Ul. Ul. Mihovila Pavleka Miškine and Drvaska ul.	Đelekovec, southeast 46.242647, 16.878232	1,39 km	municipality roads	gravel/asphalt			***
S6/20	Đelekovec, southeast	Road to lake Jegeniš 46.243063, 16.894516	1,27 km	public road	asphalt	26031		***
S6/21	Road to lake Jegeniš	Šoderica Lake 46.245120, 16.922715	2,25 km	public road	asphalt	26031		***
S6/22	Šoderica Lake	Crossroads near the train station 46.236659, 16.930408	1,43 km	public road	asphalt	2091		***
S6/23	Crossroads near the train station	Intermediate point (Šoderica Lake-Botovo) 46.232855, 16.924454	0,88 km		gravel			*

S6/24	Intermediate point (Šoderica Lake-Botovo)	Botovo, road D41 46.217565, 16.920109	1,87 km		asphalt			***
S6/25	Botovo, road D41	Drnje, road D41 46.205971, 16.907524	1,71 km	public road	asphalt	D41		***
S6/26	Drnje, road D41	Peteranec, crossroads of road nr. 2113 and 2114 46.192613, 16.912141	1,54 km	public road	asphalt	2114		***
S6/27	Peteranec, crossroads of road nr. 2113 and 2114	Peteranec, crossroads D41 and road nr. 2113 46.196750, 16.897588	1,24 km	public road	asphalt	2113		***
S6/28	Peteranec, crossroads D41 and road nr. 2113	Peteranec, crossroads D41 and road to Herešin 46.193763, 16.875946	1,83 km	public road	asphalt	D41		***
S6/29	Peteranec, crossroads D41 and road to Herešin	Herešin, crossroads of Ul. Marofska and ul. Hrvatske državnosti 46.180058, 16.869048	1,98 km	unclassified road and municipality roads	gravel/asphalt			**
S6/30	Herešin, crossroads of Ul. Marofska and ul. Hrvatske državnosti	Koprivnica, Gymnasium 'Fran Galović' 46.162356, 16.841724	3,18 km	separated bicycle path	asphalt			***
DETOURS								
S6/D1-1	Legrad, public road nr. 2078 crossroads 46.294207, 16.849637	Legrad, east 46.295028, 16.867192	1,59 km	public road, municipality roads	asphalt	2078		***
S6/D1-2	Legrad, east	Legrad, Halasz Csarda 46.297438, 16.881236	1,27 km		gravel			**
S6/D2	Road to lake Jegeniš 46.243063, 16.894516	Lake Jegeniš 46.257087, 16.885846	3,2 km		gravel			**
S6/D3	Crossroads near the train station	Drava bridge 46.240994,	0,92 km	public road	asphalt	D41		***

	46.236659, 16.930408	16.937933						
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9. Table: Subsections of S6 stage

Main roads D20 and D41 are the most challenging elements in terms of traffic volume, especially sections outside settlements. Trying to avoid them was a priority during the route planning process.

First section of the stage follows the Drava river on the northern side of Dubrava Lake to the confluence point with Mura river near Legrad. The starting point is in front of Panorama Hotel in Prelog, the first stretch of daily itinerary runs on shared bicycle/pedestrian paths inside the settlement, ensuring higher level of safety for the cyclists. Instead of using main road D20 between Prelog and Donji Mihaljevec, the route prefers a southern alternative via Oporovec. It is a medium quality gravel road excepting an 1,19 km asphalt subsection inside Oporovec village. Despite the longer stretch on unpaved surface, this option can ensure a higher level of safety compared to other alternatives, in addition, the lake is located closer. The route intersects main road D20 in Donji Mihaljevec and runs on it for the following 6,5 km to Donji Vidovec, which means higher traffic volume. The situation is the same between Donja Dubrava and Legrad, excepting the last 1 km long gravel (poor quality) section which can be regarded as a shortcut from the main road to the settlement. The confluence of the Drava and Mura rivers is a highlighted site of the daily stage, it requires further 1,27 km cycling from Legrad on unpaved surface. This section is part of the route as a detour.



24-25. Figures: Pedestrian/bicycle bridge at Donja Dubrava (right); unpaved road south of the river (left)

Second part of the stage – south of the Mura-Drava confluence – can be described with the shortage of roads in acceptable quality close to the river. Due the agricultural roads do not fulfil the quality requirements between Legrad and Šoderica, the designated AoE BT route uses inner public roads within this section. Since the unfavourable traffic conditions of D20 main route, the Legrad-Mali Otok-Imbriovec – Đelekovec- Šoderica direction was defined including a detour to Jegeniš lake (on gravel). Total length of this section is 14,5 km, majority of the used roads is low traffic asphalted road, the only

gravel stretch is a shortcut (1,16 km) between Mali Otok and Imbriovec. Traffic volume is slightly higher in the area of Šoderica (roads 26031 and 2091), but the annual average daily traffic is below 1600 vehicles. Lake Šoderica is a popular summertime destination and venue of various public events from spring until autumn. Cyclists visit Šoderica during the whole year. The route turns right east of the lake to avoid the other high traffic main road D41, but a detour leads cyclists to the Drava bridge. There is a separated pavement runs onto the bridge in parallel to the main road D41 which is officially not designated for cyclists but it can ensure them a more safe way to approach the Drava river compared to cycle on the main road.



26. Figure: Asphalted road between Đelekovec and Šoderica.

Source: e.podravina.hr



27. Figure: Šoderica lake



28. Figure: Bridges over river Drava near Šoderica lake

Source: Danijel Petrović

Šoderica-Botovo section consists of bad quality gravel (0,88 km) and a good quality asphalted road (1,87 km). Due to the lack of alternatives between Botovo and Drnje, road D41 is part of the trail for the following 1,71 km, but this subsection runs inside settlements. Intersection of roads 2113 and 2114 is located south of Drnje and east of Peteranec is a common point of two stages. Stage S6 turns into southwest direction here towards Koprivnica, while stage S7 (Koprivnica- Đurđevac) continues further to east in parallel to Drava river. It means that the last 8,2 km of the S6 stage is the first section of stage S7. The trail approaches Koprivnica via Peteranec and Herešin includes 3 km asphalted public road, 2 km medium quality gravel road (north of Herešin), and the final 3,2 km of the daily stage is separated bicycle path between Herešin and Koprivnica.

Besides stage points, cyclist can find restaurants along the stage in Legrad and Botovo, but shops, café bars to purchase basic food and supplies are available almost in every settlement the trail passes through. Bike repair kits can be found at 2 places in mid-stage: Legrad (46.297494, 16.856321), Šoderica (46.241145, 16.915587), and bicycle shops at the stage points.

4.6.4. Nature and river related values

River viewpoints:

- **River viewpoint 1** - Prelog Marina 46°19'29.2"N 16°36'17.0"E
- **River viewpoint 2** - Donja Dubrava 46°18'44.5"N 16°48'15.2"E
- **River viewpoint 3** - Legrad, Halasz Csarda 46°17'51.6"N 16°52'52.5"E
- **River viewpoint 4** - Jegeniš Lake 46°15'46.0"N 16°54'05.9"E
- **River viewpoint 5** - Šoderica Lake 46°14'29.6"N 16°55'01.9"E
- **River viewpoint 6** - Botovo bridge 46°14'29.6"N 16°56'18.7"E

River access points:

- River access 1 - Prelog Marina – visitor area, possibilities for fishing, hiking, running, bars.

- River access 2 - Donja Dubrava – visitor area, possibilities for fishing.
- River access 3 - Legrad Halasz Csarda – visitor area, possibilities for swimming, boat dock.
- River access 4 - Jegeniš Lake – visitor area, possibilities for fishing.
- River access 5 - Šoderica Lake – visitor area, possibilities for fishing, swimming, hiking, accommodation facilities, and beach bars.

Additional nature experience:

- Prelog Marina – bird watching tower
- Veliki Pažut Special Ornithological Reserve - bird watching
- Legrad, Halasz Csarda - River school, bird watching tower
- Meadow site at Zovje - watching of butterflies 46°14'04.5"N 16°50'35.1"E

4.6.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, the new AoE BT infrastructure elements for all stages in Koprivnica-Križevci County are the following:

- 2 large info boards
- 8 small info boards
- 2 resting places with bike self-service stand
- 119 signposts on 62 locations

Regarding stage S6, 2 large info boards (one financed by the budget of Međimurje County), 2 small info boards, 1 resting place and 39 signposts will be placed.

Locations of planned large info boards regarding stage S6:

- Međimurje County: Prelog – Marina (start point). Coordinates: 46.323575, 16.605011
- Koprivnica-Križevci County – Koprivnica (end point). Coordinates: 46.162455, 16.841791

Locations of planned small info boards regarding stage S6:

- Legrad – Coordinates: 46.295154, 16.866960
- Đelekovec – Coordinates: 46.249563, 16.862184

Location of planned resting place regarding stage S6:

- Šoderica lake – Coordinates: 46.244263 16.927163 - resting place with sitting elements, table and bike self-service stand

According to the elaborated signposting documentation, 39 signposts will be placed on 19 locations along that section of S6 stage belongs to Koprivnica-Križevci County. The number of signposts in Međimurje County will be defined in their official road signposting documentation.

4.7. S7 Koprivnica (HR) – Đurđevac (HR)

4.7.1. Basic information

Start point of the daily stage: Koprivnica, Gymnasium 'Fran Galović'. Coordinates: 46.162356, 16.841724

End point of the daily stage: Đurđevac, sports hall and high school. Coordinates: 46.039126, 17.066300

Length of the daily stage: 50,73 km (10,6 km – 21 % is unpaved)

Length of the detour(s): 33,76 km (12,3 km – 36 % is unpaved)



29. Figure: Map of S7 stage, Koprivnica - Đurđevac

Koprivnica is the administrative centre of Koprivnica-Križevci County which is located 10-15 km from Drava river. The bike friendly city has rich cultural and gastronomic offer, including many restaurants and different types of accommodations. The two stage points are very similar both in terms of location (distance from the river) and the scale of services they can provide. Many accommodations are available, including hotels, multiple restaurants, stores, cafe bars, bakeries. There are no other bicycle shops along the stage excepting the two stages points, and bike repair kits are also can be found in both cities.

4.7.2. Short summary of the stage

Stage S7 Koprivnica– Đurđevac is one of those few stages when both stage points are located more than 10 km from Drava river. On the one hand, wide range of services are available in stage points, on the other hand, additional kms need to be completed for cyclists to reach the riverside. Despite this factor, mid-section of the daily stage is particularly nature focused with many lakes, river viewpoints and other

type of natural sites to visit. Although high percentage of the route run parallel to the river within 1-2 km distance, detours are providing many opportunities to approach the Drava river even more. Due to the stage contains significant length of good quality public roads with very low traffic, it can be described as a good mixture of cycling and nature experience at the same time.

4.7.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S7/1	Koprivnica, Gymnasium 'Fran Galovič' 46.162356, 16.841724	Herešin, crossroads of Ul. Marofska and ul. Hrvatske državnosti 46.180058, 16.869048	3,18 km	separated bicycle path	asphalt			***
S7/2	Herešin, crossroads of Ul. Marofska and ul. Hrvatske državnosti	Peteranec, crossroads D41 and road to Herešin 46.193763, 16.875946	1,98 km	unclassified road and municipality roads	gravel/asphalt			**
S7/3	Peteranec, crossroads D41 and road to Herešin	Peteranec, crossroads D41 and road nr. 2113 46.196750, 16.897588	1,83 km	public road	asphalt	D41		***
S7/4	Peteranec, crossroads D41 and road nr. 2113	Crossroads of road nr. 2114 and road to Sigetec 46.189955, 16.918023	1,78 km	public road	asphalt	2113, 2114		***
S7/5	Crossroads of road nr. 2114 and road to Sigetec	Sigetec, west 46.191235, 16.929139	0,97 km		gravel			**
S7/6	Sigetec, west	Komatnica, crossroads 46.175905, 16.990593	5,94 km	public road, municipality roads	asphalt (partly gravel)	26032		**
S7/7	Komatnica, crossroads	Hlebine, north 46.164155, 16.972652	2,1 km		gravel			**
S7/8	Hlebine, north	Gabajeva Greda, south 46.155712, 17.011915	6,18 km	public road, municipality roads	asphalt	2114		***
S7/9	Gabajeva Greda, south	Čingi Lingi lake 46.135710, 17.055660	5,69 km	public road	asphalt	2114		***
S7/10	Čingi Lingi lake	Start of the embankment, north of Čingi Lingi 46.138890, 17.058557	0,56 km	unclassified road	gravel			**
S7/11	Start of the	Crossroads D210 and	1,35	embankment	gravel			**

	embankment, north of Čingi Lingi	embankment 46.127518, 17.064791	km					
S7/12	Crossroads D210 and embankment	Molve Ledine 46.124025, 17.073657	0,88 km	unclassified road	gravel			**
S7/13	Molve Ledine	Bridge over Koprivnica creek 46.115082, 17.083825	1,51 km	unclassified road	gravel			**
S7/14	Bridge over Koprivnica creek	Molve Grede, crossroads road nr. 2185 46.104107, 17.093126	1,95 km	unclassified road	asphalt			**
S7/15	Molve Grede, crossroads road nr. 2185	Novo Virje, Širine 46.103375, 17.115408	1,73 km	public road	asphalt	2185		***
S7/16	Novo Virje, Širine	Novo Virje, crossroads to Drnić lake 46.097923, 17.130433	1,40 km	public road	asphalt	2185		***
S7/17	Novo Virje, crossroads to Drnić lake	Novo Virje, Trepče 46.084522, 17.146821	1,97	municipality roads	gravel/asphalt mix			***
S7/18	Novo Virje, Trepče	Severovci-1 46.072120, 17.112739	4,10 km	public road	asphalt	26106		***
S17/19	Severovci-1	Severovci-2 46.067352, 17.111638	0,56 km	municipality roads	asphalt			***
S17/20	Severovci-2	Đurđevac, crossroads of roads nr. 2184 and 26106 46.045312, 17.079289	3,58 km	public road	asphalt	26106		***
S17/21	Đurđevac, crossroads of roads nr. 2184 and 26106	Đurđevac, roundabout 46.042337, 17.067982	0,96 km	public road, municipality roads	asphalt	2184		***
S17/22	Đurđevac, roundabout	Đurđevac, sports hall and high school 46.039126, 17.066300	0,53 km	public road, municipality roads	asphalt	26107		***
DETOURS								
S7/D1	Komatnica, crossroads 46.175905, 16.990593	Komatnica, stop over 46.177126, 17.000672	0,85 km		gravel			**
S7/D2-1	Gabajeva Greda, south 46.155712, 17.011915	Gabajeva Greda, settlement 46.159179, 17.016299	0,55 km		gravel			**

S7/D2-2a	Gabajeva Greda, settlement	Gabajeva Greda lake 46.158088, 17.020679	0,38 km		gravel			**
S7/D2-2b	Gabajeva Greda, settlement	Gabajeva Greda, Drava riverside 46.167327, 17.025371	1,48 km		gravel			**
S7/D3	Gornja Šuma 46.158088, 17.020679	Molve, centre 46.106196, 17.032307	3,53 km	public roads	asphalt	2114, D210		***
S7/D4-1	Crossroads D210 and embankment 46.127518, 17.064791	Repaš, north 46.137123, 17.087303	2,18 km	public road	asphalt	D210		***
S7/D4-2a-1	Repaš, north	Corner south of Novačka 46.157395, 17.046545	6,07 km	public road	asphalt	2116		***
S7/D4-2a-2	Corner south of Novačka	Ješkovo visitor area 46.175671, 17.041319	2,82 km	unclassified road	gravel			**
S7/D4-2b	Repaš, north	Čambina, crossroads in the forest 46.121790, 17.155674	8,05 km	public road, forests roads	asphalt	D210		***
S7/D4-2b-1	Čambina, crossroads in the forest	Čambina, lake 46.122461, 17.164527	0,87 km		gravel			**
S7/D4-2b-2	Čambina, crossroads in the forest	Čambina, Drava riverside 46.111399, 17.153169	1,28 km		gravel			**
S7/D4-2b-3	Čambina, crossroads in the forest	Čambina, chapel 46.120368, 17.144922	1,06 km		gravel			**
S7/D5	Molve Ledine	Sekuline stop over 46.119129, 17.071828	0,67 km		gravel			**
S7/D6	Novo Virje, Širine	Drava river, stop over-1 46.113370, 17.113582	1,18 km	unclassified road	gravel			**
S7/D7-1	Novo Virje, crossroads to Drnić lake	Novo Virje, Drenovica north 46.108012, 17.140196	1,63 km	public road, municipality roads	asphalt	2185		**
S7/D7-2	Novo Virje, Drenovica north	Drava river, stop over – 2 (dock) 46.110239, 17.152356	1,16 km		gravel			**

10. Table: Subsections of S7 stage

First 8,2 km of the stage from Koprivnica to the intersection of roads 2113 and 2114 (south of Drnje and east of Peteranec) is an overlap with S6 stage (Prelog-Koprivnica). The section includes more than 3 km separated bicycle/pedestrian path between Koprivnica and Herešin, and a 2 km long gravel subsection between Herešin and Peteranec. The trail runs on public roads 2113 and 2114 for 1,7 km then turns left and passes through the settlements of Sigetec and Komatnica on less busy roads. The first km of this section is gravel, the following 6 km is mainly asphalted surface in medium quality between Sigetec and Komatnica, but it contains unpaved sections as well. Cyclists can easily approach Drava river at Komatnica, there is a stopover less than 1 km away from the intersection.



30. Figure: Asphalted road in Sigetec

Source: peteranec.hr

The main route leads to Hlebine which village is famous for naïve art, but the 2 km long gravel road connecting Komatnica with Hlebine need to be improved. The trail uses public road 2114 for the next 12 km from Hlebine to Čingi Lingi lake, passing through a beautiful forest area near Gabajeva Greda. This road has good quality asphalt and the traffic volume is also very favourable (very low) for cycling. The second river view/access point of the daily stage can be found in Gabajeva Greda, which is defined as a visitor area. Lake Čingi Lingi is a popular summertime destination, but cyclists visit the area during the whole year. Afterwards, the longest (4,3 km) unpaved section of the stage starts that goes to Molve Ledine, the trail is able to stay continually very close to Drava within this stretch. From Molve Grede, the route mainly goes on asphalted roads again for the remaining distance, using roads run in parallel to Drava. Since the traffic volume is very low and the quality of the surface is excellent on these roads, cyclists are able to ride in safe and comfortable circumstances. In addition, many opportunities are given to approach the river, two detours lead to the riverbank between Molve Grede and Novo Virje. (Coordinates of these intersections: 46.103375, 17.115408; 46.097923, 17.130433). As the route

reaches the west end of Novo Virje, it turns into the direction of Drnić lake and runs along at the edge of the forest until the intersection of road nr. 26106 (last 0,5 km before the intersection is unpaved). This is the point where stage S7 meets stage S8 (Đurđevac (HR) – Pitomača), the remaining 8,6 km on asphalted public roads is an overlap of two stages.



31. Figure: Asphalted road near Molve Grede

Source: molve.hr



32. Figure: Čambina area

Source: Elizabeta Milanović Glavica

Repaš detour is a special one among all the detours of the AoE Bike Trail. Due to the Croatian-Hungarian border runs northern from the Drava in this part, territories on the left riverbank belong to Croatia. The area has “dead-end” character, the permanent connection between the two sides is limited. Besides Repaš, the nearest bridge connection is located near Botovo, 20 km in northwestern direction.

Considering the fact that the attractive nature sites on the other side are strongly connected to the values of the AoE Bike Trail, the route explores it in form of a smaller network of detours with two lines in different directions. The focus point of this area is the village of Repaš where the detour splits into two: the northeastern line leads to Ješkovo visitor area (Ješkovo lake), while the southwestern one goes to Čambina protected area (river viewpoint, oxbow lake, bird watching tower, educational trail). Significant part of the route on the left riverbank means unpaved roads.

4.7.4. Nature and river related values

River viewpoints:

- **River viewpoint 1** - Komatnica 46°10'39.4"N 16°59'55.5"E
- **River viewpoint 2** - Ješkovo 46°10'20.5"N 17°02'02.4"E
- **River viewpoint 3** - Gabajeva Greda lakes 46°09'19.5"N 17°01'16.8"E
- **River viewpoint 4** - Čingi Lingi Lake 46°08'08.4"N 17°03'18.7"E
- **River viewpoint 5** - Repaš bridge 46°07'41.8"N 17°04'05.1"E
- **River viewpoint 6** - Čambina Significant landscape 46°07'22.4"N 17°09'55.2"E
- **River viewpoint 7** - Molve Ledine - Sekuline 46°07'31.8"N 17°04'10.1"E
- **River viewpoint 8** - Sekuline Lakes 46°07'09.6"N 17°04'35.2"E
- **River viewpoint 9** - Novo Virje 46°06'45.4"N 17°06'56.4"E



33. Figure: Čingi Lingi lake

River access:

- River access 1 - Ješkovo – visitor area, possibilities for fishing
- River access 2 - Gabajeva Greda lakes - visitor area and stop over, possibilities for fishing
- River access 3 - Čingi Lingi Lake – visitor area, possibilities for fishing and swimming
- River access 4 - Sekuline Lakes – visitor area, possibilities for fishing

- River access 5 - Čambina – visitor area, possibilities for hunting

Additional nature experience:

- Repaš monument of nature 46°09'14.8"N 17°06'52.1"E
- Đurđevac sands 46°01'47.8"N 17°05'56.0"E

4.7.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, the new AoE BT infrastructure elements for all stages in Koprivnica-Križevci County are the following:

- 2 large info boards
- 8 small info boards
- 2 resting places
- 119 signposts on 62 locations

Regarding stage S7, 2 large info boards, 4 small info boards, 1 resting place and 54 signs will be placed.

Locations of the planned large info boards regarding stage S7:

- Koprivnica (start point). Coordinates: 46.162455, 16.841791
- Đurđevac (end point). Coordinates: 46.039070, 17.066494

Locations of the planned small info boards regarding stage S7:

- Hlebine. Coordinates: 46.150990, 16.968948
- Molve. Coordinates: 46.106126, 17.031770
- North of Repaš. Coordinates: 46.145728, 17.083593
- Novo Virje. Coordinates: 46.099503, 17.126483

Location of the planned resting place regarding stage S7:

- Čingi Lingi lake – Coordinates: 46.133557, 17.056089 - with sitting elements, table, and bike self-service stand.

According to the already elaborated road signposting documentation, 54 signposts will be placed on 30 locations along the stage.

4.8. S8 Đurđevac (HR) – Pitomača (HR)

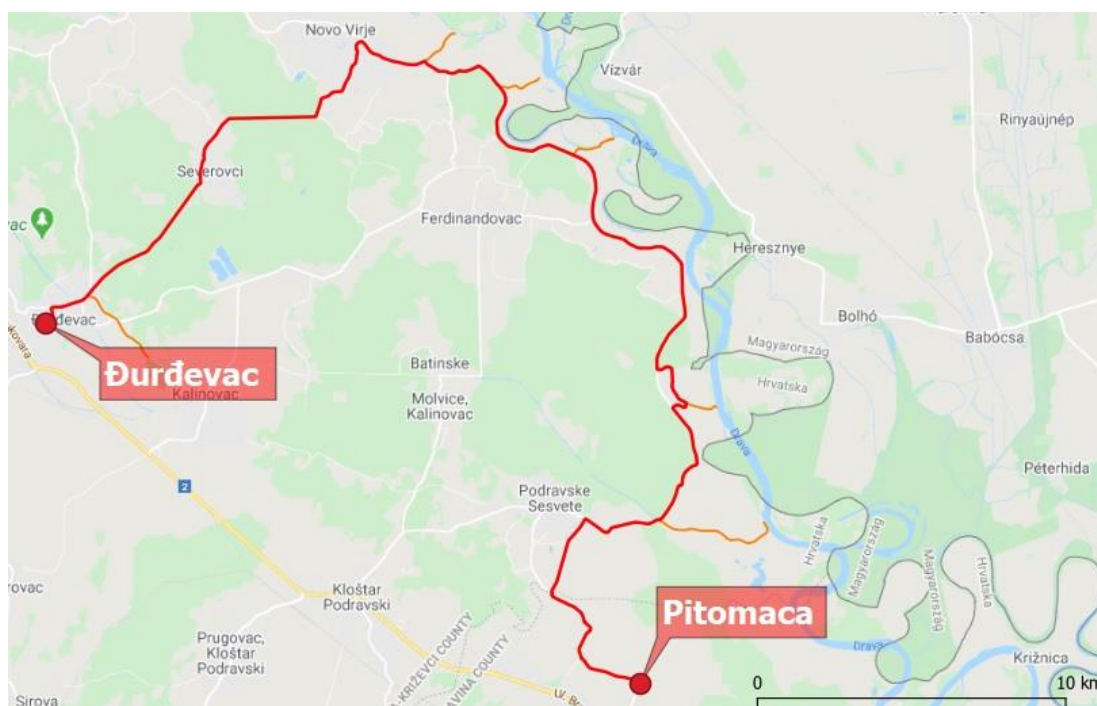
4.8.1. Basic information

Start point of the daily stage: Đurđevac, sports hall and high school. Coordinates: 46.039126, 17.066300

End point of the daily stage: Pitomača, crossroads of Ulica Tina Ujevića and Ulica Antuna Gustava Matoša. Coordinates: 45.971031, 17.222837

Length of the daily stage: 34,89 km (1,76 km – 5 % is unpaved)

Length of the detour(s): 8,68 km (4,74 km – 55 % is unpaved)



34. Figure: Map of S8 stage, Đurđevac - Pitomača

Đurđevac is located 10-15 km from Drava river in Koprivnica-Križevci County. The city has many accommodations to offer including hotels, multiple restaurants, stores, cafe bars, bakeries. Bicycle services are also available, bicycle shops and bike repair kit can be found in the city.

Pitomača is a municipality in Virovitica-Podravina County, the village is situated closer to the river (3,5 – 4 km) compared to Đurđevac. The route does not pass through the centre of Pitomača, but cyclists can find accommodation possibilities and other services there. The recommended accommodations are the following: Prenočište Zlatni klas, Rooms OPG Ruža Fabčić, Prenočište 'Luka' and Hotel 'Divino'.

4.8.2. Short summary of the stage

This is one of the shortest daily stage of the AoE Bike Trail with 36 km main route. Almost the entire stage (95 %) runs on paved roads, only the detours include considerable lengths of unpaved stretches. Aside from some section around the stage points, the trail runs very close to Drava river, offering many

opportunities to visit the riverside. Many additional nature sites can attract tourists within the daily stage, such as sand dunes near Đurđevac or special forest reserve "Crni jarki". Due to the closeness to nature and high proportion of well-rideable roads with very low traffic, daily stage S8 can be an enjoyable cycling and nature experience at the same time.

4.8.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S8/1	Đurđevac, sports hall and high school 46.039126, 17.066300	Đurđevac, roundabout 46.042337, 17.067982	0,53 km	municipality roads, public road	asphalt	26107		***
S8/2	Đurđevac, roundabout	Đurđevac, intersection of roads nr. 2184 and 26106 46.045312, 17.079289	0,96 km	public road, municipality road	asphalt	2184		***
S8/3	Đurđevac, intersection of roads nr. 2184 and 26106	Severovci-2 46.067352, 17.111638	3,58 km	public road	asphalt	26106		***
S8/4	Severovci-2	Severovci-1 46.072120, 17.112739	0,56 km	municipality road	asphalt			***
S8/5	Severovci-1	Novo Virje, Drenovica, crossroads of 26106 and 2185 roads 46.096085, 17.158540	5,31 km	public road	asphalt	26106		***
S8/6	Novo Virje, Drenovica, crossroads of 26106 and 2185 roads	Novo Virje, Crnec 46.092084, 17.176979	1,62 km	public road	asphalt	2185		***
S8/7	Novo Virje, Crnec	Crossroads to Drava river- 1 46.086854, 17.198915	2,03 km	public road	asphalt	2185, 26114		***
S8/8	Crossroads to Drava river- 1	Crossroads to Drava river- 2 46.073134, 17.220201	3,05 km	public road	asphalt	26114		***
S8/9	Crossroads to Drava river- 2	Brodić- 1 46.029654, 17.244642	6,67 km	public road	asphalt	26114		***
S8/10	Brodić- 1	Brodić- 2 46.022963, 17.253010	1,3 km	municipality road	gravel			**
S8/11	Brodić- 2	Brodić- 3 46.021982, 17.249121	0,42 km	municipality road	gravel			**

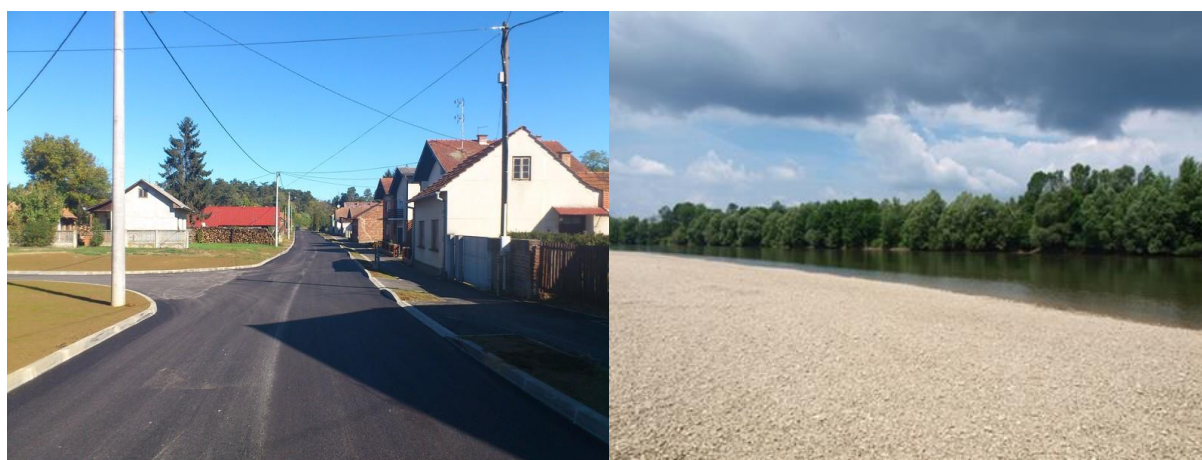
S8/12	Brodić- 3	Podravske Sesvete, east, Mekiš ulica 45.999309, 17.244921	3,08 km	public road	asphalt	26114		***
S8/13	Podravske Sesvete, east, Mekiš ulica	Podravske Sesvete, crossroads Dravska ul-ul. Braće Radić, 45.999515, 17.223643	1,84 km	public road	asphalt	26114		***
S8/14	Podravske Sesvete, crossroads Dravska ul-ul. Braće Radić,	Podravske Sesvete, south crossroads 45.984832, 17.213890	1,83 km	municipality road	asphalt			***
S8/15	Podravske Sesvete, south crossroads	Pitomača, crossroads of Ul. Tina Ujevića and Ul. Antuna Gustava Matoša 45.971031, 17.222837	3,58 km	public road	asphalt	26117		***
DETOURS								
S8/D1-	Đurđevac, crossroads of 2184 and 2214 46.044720, 17.078715	Đurđevac sands 46.032431, 17.096070	2,02 km	public road	asphalt	2214		***
S8/D2	Novo Virje, Crnec	Novo Virje, Čarda visitor area 46.097694, 17.185243	0,96 km	unclassified road	asphalt/gravel			***
S8/D3	Crossroads to Drava river- 1	Stop over sandbars 46.089210, 17.211427	0,99 km	unclassified road	gravel			**
S8/D4	Crossroads to Drava river- 2	Stop over, Ferdinandovac 46.076446, 17.232023	1,08 km	unclassified road	gravel			**
S8/D5	Brodić- 2	Brodić, ferry 46.022178, 17.261669	0,72 km	unclassified road	gravel			**
S8/D6	Podravske Sesvete, east, Mekiš ulica	Mekiš Karaula	2,91 km		gravel/asphalt			**

11. Table: Subsections of S8 stage

Since the stage point Đurđevac is situated 10-15 km from the Drava river, the first 11 km of the daily stage S8 is focusing to approach the riverside area. Road nr. 26106 is the most appropriate track for that purpose, due to it is an asphalted public road between Đurđevac and Novo Virje with very low traffic, the 9,5 km distance can be completed within 1,5 hours. The trail follows the main road all along this sub-section excepting a 0,5 km long part when leaves it inside Severovci. This section overlaps with daily stage S7.

The first detour opportunity can be found within the first 2 km in Đurđevac, it leads the visitors to Đurđevac sands reserve which sometimes called the Croatian Sahara. The site is a protected botanical

area with large number of endemic species, unique flora and fauna and spectacular sand dunes. As this detour requires only 4 km additional cycling back and forth, it does not significantly increase the total daily distance has to be completed. The main route of the trail turns onto road nr. 2185 in Novo Virje, which is still a low traffic infrastructure element, but the number of vehicles is slightly higher compared to the previous road. From this point, the main route stays on the closest asphalted public road to the river all along this stage, while five detours help the cyclists to approach the riverside. The lengths of these detours do not exceed 1 km in 4 out of 5 cases. The first junction where a detour begins within this section can be found in Novo Virje, where the public road takes a right turn at the shop (coordinates: 46.092084, 17.176979). The detour is well rideable by bicycle, ends at a tributary water of Drava river where a "Čarda" is also located.



35-36. Figures: Asphalted road in Đurđevac (left) and Drava river at Novo Virje (right)

Sources: <http://www.zuc-kc.hr/>

<http://novo-virje.hr/>

The main route arrives at a three-way intersection – with a cross in the middle - after 600 meters, it leaves the road 2185 here and keeps straight on road nr. 26114. Conditions of this road essentially are not changed compared to the previous one neither in terms of quality or traffic volume. On the next 4,5 km the road is edged with forests all along from the right, while houses can be visible sporadically from the left. 750 meters from the previous three- way intersection, another one comes where cyclists need to turn right. Shortly afterwards, (700 meters) there is the starting point of the next detour which is an acceptable quality gravel road, it leads tourists to a stopover area (sandbars). The third detour of the daily stage is located 3 km onwards, cyclists can recognize the a four way intersection when they notice the disappearance of the continuous forest belt from the right side of the road. The main route remains on road nr. 26114, but a few meters before the traffic sign “start of the settlement” of Brodić, it turns left and leaves this road. The surface changes from asphalt to gravel for the next 1,7 km. There is a possibility here – in form of a detour – to approach river Drava again. The last detour regarding this stage starts before the bridge over Rogstrug canal, there is a cross at the corner which help to find the

spot where need to turn left. This is the longest detour with almost 3 km in one way, cyclists have to complete this distance on mixed asphalt/gravel surface. Due to the pattern of the existing rideable roads in the area, the trail runs in increased distance from the river within the last section of the daily stage (Podravske Sesvete- Pitomača).



37. Figure: Newly asphalted part of Brodić -Mekiš section

Source: <http://www.rooster.city/>

At the intersection of Dravska and Braće Radić streets in Podravske Sesvete, the route turns left onto a municipality road, then 1,8 km onwards onto the public road nr. 26117 which will be followed to Pitomača. This last section means additional 3,5 km cycling. Besides the two stage points, cyclists can find bicycle related service in form of a bike repair kit in Podravske Sesvete, shops and café bars to buy food or drink are available in many settlements along the trail or very close to it (Novo Virje, Kalinovac, Ferdinandovac, Podravske Sesvete, Klostar Podravski). Restaurants and accommodations can be found in a limited number of places, most of them are located in Đurđevac or Pitomača.

4.8.4. Nature and river related values

River viewpoints:

- **River view 1** - Drnić Lake 46°05'23.3"N 17°08'26.4"E
- **River view 2** - Novo Virje dock 46°06'39.7"N 17°09'00.4"E
- **River view 3** - Čambina landscape 46°07'22.4"N 17°09'55.2"E
- **River view 4** - Novo Virje 3 46°05'21.0"N 17°12'36.3"E
- **River view 5** - Čarda 46°05'51.5"N 17°11'04.6"E
- **River view 6** - Ferdinandovac dock 46°04'40.0"N 17°13'48.7"E
- **River view 7** - Brodić 46°01'23.9"N 17°15'39.1"E

- **River view 8** - Mekiš 45°59'47.9"N 17°16'34.0"E

River access:

- **River access 1** - Drnić Lake – visitor area, possibilities for fishing and swimming
- **River access 2** - Novo Virje dock – stop over, possibility to access the other side of the river
- **River access 3** - Novo Virje 3 - stop over, scenic view of river
- **River access 4** - Ferdinandovac dock – stop over, possibility to access the Hungarian side
- **River access 5** - Brodić – visitor area, possibilities for boating
- **River access 6** - Mekiš stop over, scenic view

Additional nature experience:

- Đurđevac sands 46°01'47.8"N 17°05'56.0"E
- Crni Jarki reserve 46°01'24.5"N 17°08'36.3"E

4.8.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, the new AoE BT infrastructure elements for all stages in Koprivnica-Križevci County are the following:

- 2 large info boards
- 8 small info boards
- 2 resting places
- 119 signposts on 62 locations

Regarding stage S8, 2 large info boards³, 2 small info boards and 26 signs will be placed. Resting place will not be installed.

Locations of the planned large info boards regarding stage S8:

- Koprivnica-Križevci County: Đurđevac (start point). Coordinates: 46.039070, 17.066494
- Virovitica-Podravina County: Pitomača (end point). Coordinates: 45.971031, 17.222837

Locations of the planned small info boards regarding stage S8:

- Ferdinandovac. Coordinates: 46.074273, 17.204909
- Brodić. Coordinates: 46.029946, 17.248916

According to the already elaborated road signposting documentation, 26 signposts will be placed on 13 locations along that section of S6 stage belongs to Koprivnica-Križevci County. Additionally, there are 2 locations where signposts are planned to be placed in Virovitica-Podravina County.

³ One of them will be financed by the budget of Virovitica-Podravina County

4.9. S9 Pitomača (HR) – Kapela Dvor (HR)

4.9.1. Basic information

Start point of the daily stage: Pitomača, crossroads of Ulica Tina Ujevića and Ulica Antuna Gustava Matoša. Coordinates: 45.971031, 17.222837

End point of the daily stage: Kapela Dvor, Kurija Janković. Coordinates: 45.889172, 17.420560

Length of the daily stage: 25,4 km (100 % paved)

Length of the detour(s): 9,22 km (3,63 km – 39 % unpaved)



38. Figure: Map of S9 stage, Pitomača – Kapela Dvor

Pitomača is located 3,5 – 4 km from the Drava river. The route does not pass through the centre of the settlement, but cyclists can easily find accommodation possibilities and other services there. The recommended accommodations in Pitomača are the following: Prenočište Zlatni klas, Rooms OPG Ruža Fabčić, Prenočište 'Luka' and Hotel 'Divino'. Other services are also available there including bike repair, food, and supplies.

Kapela Dvor is a village along the road D5, which ensures connection between Virovitica and Barcs (Hungary). It has only one accommodation possibility: Heritage Hotel KURIJA JANKOVIĆ (****). The route does not pass through the town of Virovitica but taking it into account both in terms of accommodations and services is recommended. Bicycle related services (bike shops) are also available in Virovitica, self-service kits for basic repairs can be found in Kapela Dvor (at Heritage hotel Kurija Janković) and the neighbouring Gornje Bazje as well.

4.9.2. Short summary of the stage

The route is defined based on a detailed field trip by the regional coordinator, in line with the principles of route planning methodology. 100 % of the main route within this stage consists of good quality asphalted roads with very low traffic. There are many points with perfect river views, two educational paths and a bird watching tower along the stage. Detours help to explore the whole area, many of the are unpaved roads in different quality. Križnica is a highlighted area of the stage, it is surrounded by rivers, offering experiences close to nature and a lot of beautiful views. Natural attractions and traffic-free /low traffic roads together provide the undisturbed enjoyment of cycling in nature.

4.9.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S9/1	Pitomača, crossroads of Ulica Tina Ujevića and Ulica Antuna Gustava Matoša. Coordinates: 45.971031, 17.222837	Crossroads near to Stari Gradac gas station 45.960117, 17.303809	7,48 km	uncategorised road	asphalt			***
S9/2	Crossroads near to Stari Gradac gas station	Križnica bridge 45.959451, 17.310018	0,58 km	public road	asphalt	40003		***
S9/3	Križnica bridge	Okrugljača – centre 45.933060, 17.368095	6,56 km	public road	asphalt	40003		***
S9/4	Okrugljača – centre	Bušetina – centre 45.899780, 17.358192	4,08 km	public road	asphalt	4003		***
S9/5	Bušetina – centre	Crossroads south of Turanovac 45.883314, 17.388144	3,22 km	public road	asphalt	4007		***
S9/6	Crossroads south of Turanovac	Turanovac, crossroads of Jelav-Ivana Gorana Kovačića 45.892478, 17.395434	1,02 km	public road	asphalt	40007		***
S9/7	Turanovac, crossroads of Jelav- Ivana Gorana Kovačića	Turanovac, crossroads of Ivana Gorana Kovačića - Stjepana Radića 45.890541, 17.403313	0,64 km	uncategorised road	asphalt			***
S9/8	Turanovac, crossroads of Ivana Gorana Kovačića - Stjepana Radića	Kapela Dvor, crossroads D5 45.886155, 17.412611	0,93 km	municipality road	asphalt	4009		***
S9/9	Kapela Dvor,	Kapela Dvor, Kurija	0,71 km	public road	asphalt	D5	1042	***

	crossroads D5	Janković 45.889172, 17.420560						
DETOURS								
S9/D1-1	Križnica bridge	Križnica, west 45.975058, 17.345725	3,3 km	public road	asphalt	40004		***
S9/D1-2a	Križnica, west	Križnica, centre 45.972301, 17.357448	0,97 km	public road	asphalt	40004		***
S9/D1-2b	Križnica, west	Križnica, Natura 2000 Park 45.982356, 17.339329	0,97 km	uncategorised road	macadam			***
S9/D1-2a-1	Križnica, centre	Križnica, oxbow Crni Jarak 45.970292, 17.363817	0,55 km	uncategorised road	asphalt/dirt			**
S9/D1-2a-2	Križnica, centre	Križnica, bird watching tower 45.958182, 17.353078	2,08 km	uncategorised road	asphalt/dirt			**
S9/D2	Okrugljača – centre	Drava river, north of Okrugljača 45.943752, 17.369164	1,35 km	uncategorised road	macadam			**

12. Table: Subsections of S9 stage

Cyclists can reach the Križnica bridge with 8 km cycling on low traffic asphalted roads from Pitomača. Križnica is a highlighted area of the stage, which is located on the left riverbank of Drava, and surrounded by rivers. Due to its closed location, the territory is not part of the main route, but fully justified to be included as a detour. There are a ferry and a suspension bridge for ensuring the connection between the two sides, the bridge is allowed only for pedestrians and cyclists. The other side offers numerous nature attractions to see, including nice views of the Drava. The settlement is reachable from the ferry/bridge on asphalt where cyclotourists can find an already existing resting place (E 562779 N 5091367), bike repair facility (E 562793, N 5091376) and some restaurants to eat hot meal (Dravska iža; Ribička klet Rengel). The revitalization of the oxbow called “Crni jarak” and the alluvial forests in the surrounding area were realised. An approximately 12 km long educational trail is called “The Old Drava”, and a Natura 2000 park with a circular educational trail were also established, all sites are reachable by bicycle on macadam or dirt surface. The implementation of the project Križnica Visitor Centre - Interpretation Centre of the Biosphere Reserve Mura-Drava-Danube has started, which will establish a new Visitor Centre with numerous additional facilities for visitors. Few kilometres downstream there is a bird watching tower (E 566127 N 5091288), perfect spot for observing both the river and some of the numerous protected species. Swimming in the Drava river is

forbidden. Nevertheless, local population is using a location (E 562856 N 5091513) for this purpose on their own responsibility.



39. Figure: Suspension bridge and ferry at Križnica

The main route on the right riverside leads through Starogradački Marof then reaches the village of Okrugljača. This is the second (and last), 1,35 km long detour of the daily stage, going to the Drava riverside on acceptable quality gravel road. Between Okrugljača and Zrinj Lukački/Terezino Polje, there is no road connection in acceptable quality close to the river, thus the route has to continue in south direction through Bušetina and Turanovac. The used asphalted roads have very low traffic volume therefore they are optimal for cycling. The stage end point, Kapela Dvor is located along the D5 main road, where the traffic is over 1000 AADT. Despite it is below the allowed limit defined in the methodology, the basic intention is to keep cyclists off this road as long as possible. This is the reason why the AoE BT route goes through Turanovac before it reaches Kapela Dvor. In Kapela Dvor, an existing resting place (E 571306 N 5083647) and bike repair facility are also available at the heritage hotel Kurija Janković. Cyclists can purchase food and supplies in Pitomača, Bušetina, Turanovac or the nearby Virovitica.



40-41. Figures: River viewpoint with benches north of Okrugljača(left); Heritage hotel Kurija Janković in Kapela Dvor (right)

4.9.4. Nature and river related values

River viewpoints:

- River viewpoint 1 – Križnica bridge and ferry (45.959378, 17.310259)
- River viewpoint 2 – Križnica – on Rinya creek (45.970295, 17.363794)
- River viewpoint 3 – Križnica – river view and bird-watching tower (45.958229, 17.353097)
- River viewpoint 4 - Okrugljača (45.943752, 17.369164)

Additional nature experience:

- oxbow Crni jarak and the alluvial forests in the surrounding area (E 567701 N 5091273)
- educational trail - “The Old Drava”, approximately 12 km long
- Natura 2000 park with a circular educational trail
- a bird watching tower (E 566127 N 5091288), perfect spot for observing both the river and some of the numerous protected species

4.9.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all stages in Virovitica-Podravina County are the following:

- 3 large info boards
- 10 small info boards
- 1 resting place
- 5 bike racks
- 4 solar benches
- 5 service stations
- 100 signs (estimated number)

Regarding stage S9, 2 large info boards, 3 small info board, 2 bike racks, 1 service station, 1 solar bench will be installed. Resting place will not be installed. AoE Bike Trail equipment will be placed next to the

existing infrastructure (where it is feasible) – to supplement it and with project’s visibility markings to put emphasis on the Interreg Danube Transnational Programme.

Locations of the planned large info boards regarding stage S9:

- Pitomača (start point). Coordinates: 45.971031, 17.222837
- Kapela Dvor (end point). Coordinates: 45.889172, 17.420560

Locations of the planned small info boards regarding stage S9:

- At the existing resting place - Križnica bridge. Coordinates: 45.959272, 17.309981
- Okrugljača – Coordinates: 45.932976, 17.367534
- Between Bušetina and Turanovac (where Podravina meets Slavonia). Coordinates: 45.888268
17.376522

Locations of planned bike racks, service station and solar bench regarding stage S9:

- Bike rack: At the existing resting place - Križnica bridge. Coordinates: 45.959272, 17.309981
- Bike rack: Kapela Dvor. Coordinates: 45.888986, 17.418766
- Service station: Križnica settlement, centre. Coordinates: 45.972207, 17.357474
- Solar bench: Kapela Dvor. Coordinates: 45.888986, 17.418766

According to the elaborated road signposting documentation, signposts will be placed on 21 locations along the stage.

4.10. S10 Kapela Dvor (HR) -Noskovci (HR)

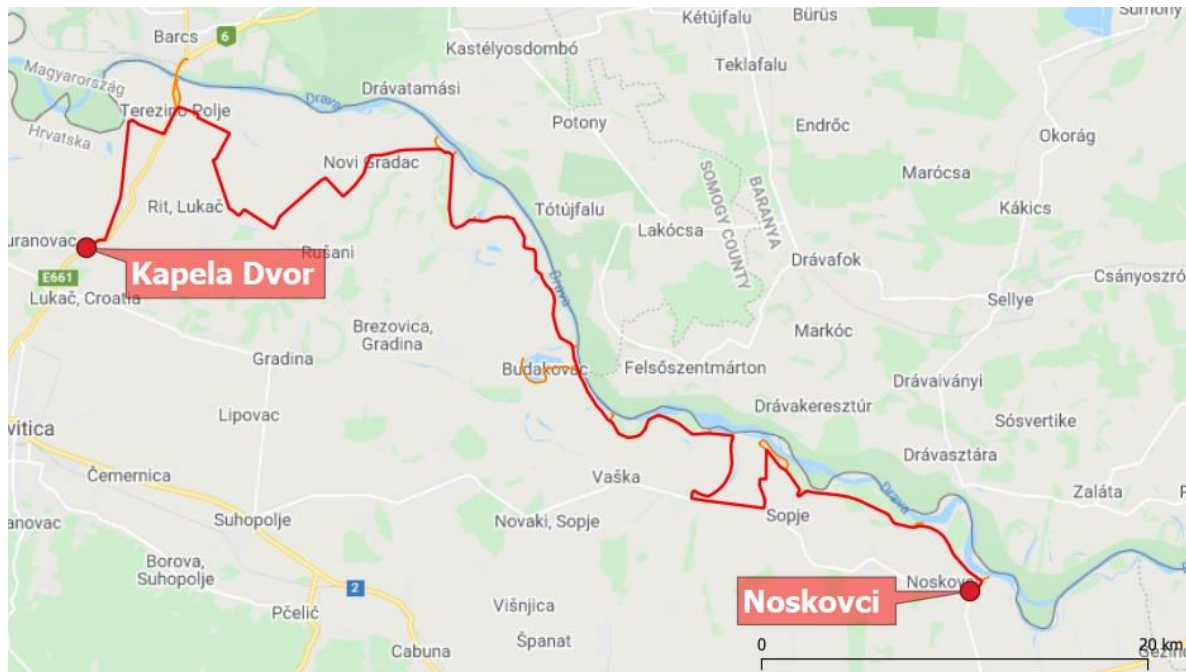
4.10.1. Basic information

Start point of the daily stage: Kapela Dvor, Kurija Janković. Coordinates: 45.889172, 17.420560

End point of the daily stage: Noskovci, Information and Educational Center. Coordinates: 45.780067, 17.831047

Length of the daily stage: 61,44 km (44,64 km – 73 % is unpaved)

Length of the detour(s): 9,59 km (6,21 km – 65 % is unpaved)



42. Figure: Map of S10 stage, Kapela Dvor - Noskovci

Kapela Dvor is a village along the road D5 which ensures connection between Virovitica and Barcs (Hungary). It has only one accommodation possibility: Heritage Hotel KURIJA JANKOVIĆ (****). The route does not pass through the town of Virovitica, but it is worth taking it into account both in terms of accommodations and services is recommended. Bicycle related services (bike shops) are also available in Virovitica, self-service kits for basic repairs can be found in Kapela Dvor (at Heritage hotel Kurija Janković) and the neighbouring Gornje Bazje as well.

The other stage point is also a small village, Noskovci is located very close to Drava river. The accommodation options and availability of services are very limited in the whole area. The Information and Educational Center has hostel type rooms, moreover they provide bike repair facility. An exhibition on flora and fauna of the Mura-Drava-Danube Biosphere Reserve can be visited, and hiking to the Drava river is also possible (with guidance on demand). Wider range of accommodations and other services are available in Donji Miholjac and Slatina, and there is a restaurant in Medinci. However, it requires a long additional distance to be completed from Noskovci, in order to reach them.

4.10.2. Short summary of the stage

The route is defined based on a detailed field trip by regional coordinator, in line with the principles of route planning methodology. Significant part (73 %) of the main route consists of unpaved roads including two longer sections on embankment, the remaining parts are mainly asphalted public roads. There is no high traffic threat in relation this stage since the embankments are traffic free and all the involved public roads have very low traffic volume. There are many points with perfect river views, two educational trails and a bird watching tower along the stage. Beside the bike trail, cyclist can visit two oxbows (Liman and Budakovac) as well. In case of this stage, designation of the trail very close to the river was feasible, due to the existence of appropriate roads rideable by bicycle.

4.10.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S10/1	Kapela Dvor, Kurija Janković 45.889172, 17.420560	Crossroads between Kapela Dvor and Gornje Bazje 45.892605, 17.428655	0,76 km	public road	asphalt	D5	1042	***
S10/2	Crossroads between Kapela Dvor and Gornje Bazje	Terezino Polje, south 45.926756, 17.456054	5,75 km	uncategorised road	macadam			*
S10/3	Terezino Polje, south	Terezino Polje, north 45.935557, 17.462781	1,11 km	public roads	asphalt	D5, 40009	1042	***
S10/4	Terezino Polje, north	Veliko Polje, end of the settlement 45.902492, 17.486475	5,22 km	public road	asphalt	40009		***
S10/5	Veliko Polje, end of the settlement	Žlebina – entrance 45.896270, 17.507039	1,95 km	public road	macadam	40011		***
S10/6	Žlebina – entrance	Žlebina – centre 45.912639, 17.531147	2,65 km	public road	asphalt	40011		***
S10/7	Žlebina – centre	Žlebina – crossroads of road 4005 and 40014 45.906543, 17.539368	0,92 km	public road	asphalt	4005		***
S10/8	Žlebina – crossroads of road 4005 and 40014	Novi Gradac – end of the settlement 45.920503,	2,49 km	public road	asphalt	40014		***

		17.560585						
S10/9	Novi Gradac – end of the settlement	Path to Drava river -1 45.921964, 17.584301	1,85 km	public road	macadam	40014		***
S10/10	Path to Drava river -1	Path to Drava river -2 45.919801, 17.590210	0,59 km	public road	macadam	40014		***
S10/11	Path to Drava river -2	Liman, north of Detkovac 45.898888, 17.600630	3,44 km	public road, dyke	macadam	40014		***
S10/12	Liman, north of Detkovac	Budakovac, path to the river 45.857732, 17.646074	7,04 km	dyke	macadam			***
S10/13	Budakovac, path to the river	Budakovac, road to the settlement 45.851004, 17.648299	0,79 km	dyke	macadam			***
S10/14	Budakovac, road to the settlement	Vaška, road to the river 45.833638, 17.663527	2,28 km	dyke	macadam			***
S10/15	Vaška, road to the river	Kapinci, road to the river 45.829952, 17.709994	4,46 km	dyke	macadam			***
S10/16	Kapinci, road to the river	Kapinci, settlement 45.808854, 17.701434	4,29 km	dyke, uncategorised road	macadam			***
S10/17	Kapinci, settlement	Sopje, west 45.805662, 17.735077	2,64 km	public road	asphalt	4024		***
S10/18	Sopje, west	Sopje, swimming area-1 45.824667, 17.736193	2,37 km	uncategorised road	asphalt/macadam			***
S10/19	Sopje, swimming area-1	Sopje, swimming area-2 45.817894, 17.745466	1,05 km	dyke	macadam			***
S10/20	Sopje, swimming area-2	Noskovci, path to the river – 1 45.799610, 17.805626	5,75 km	dyke	macadam			**
S10/21	Noskovci, path to the river - 1	Noskovci, path to the river – 2 45.782330, 17.836166	3,25 km	dyke	macadam			***
S10/22	Noskovci, path to the river - 2	Noskovci, end of the settlement	0,45 km	dyke	macadam			***

		45.779024, 17.833669						
S10/23	Noskovci, end of the settlement	Noskovci, Information and Educational Center 45.780067, 17.831047	0,34 km	public road, municipality road	asphalt	4024		***
DETOURS								
S10/D1	Terezino Polje, sport field 45.934166, 17.461307	Drava bridge, Terezino Polje-Barcs 45.945671, 17.461740	1,3 km	public road	asphalt	D5		***
S10/D2	Terezino Polje, north	Terezino Polje, Drava river 45.944199, 17.462301	1,01 km	municipality road / unclassified road	asphalt/dirt			**
S10/D3	Path to Drava river -1	River viewpoint-1, north of Detkovac 45.925735, 17.582961	0,51 km	unclassified road	dirt			*
S10/D4	Path to Drava river -2	River viewpoint-2, north of Detkovac 45.921042, 17.591685	0,18 km	unclassified road	dirt			*
S10/D5	Liman, north of Detkovac	oxbow lake 45.900037, 17.600587	0,11 km	unclassified road	macadam			***
S10/D6	Budakovac, path to the river	Budakovac, Drava river viewpoint 45.858165, 17.647662	0,15 km	unclassified road	dirt			***
S10/D7	Budakovac, road to the settlement	Budakovac, lake and settlement 45.854161, 17.623000	3,17 km	unclassified road / public road	macadam/asphalt	4014		***
S10/D8	Vaška, road to the river	Vaška, river viewpoint 45.836238, 17.664426	0,34 km	unclassified road	macadam			***
S10/D9	Kapinci, road to the river	Kapinci, river viewpoint 45.830818, 17.710120	0,11 km	unclassified road	dirt			**
S10/D10	Sopje, swimming area-1	Sopje, swimming area-2	2,07 km	unclassified road	dirt			**
S10/D11	Noskovci, path to the river – 1	Noskovci, river viewpoint 45.800816, 17.809078	0,35 km	unclassified road	dirt			***

S10/D12	Noskovci, path to the river – 2	Noskovci, birdwatching tower 45.783371, 17.839446	0,29 km	uncategorised road	dirt			***
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13. Table: Subsections of S10 stage

Daily stage S10 starts on the public road D5, next to the heritage hotel Kurija Janković in Kapela Dvor. This road has the highest traffic volume (1042 AADT), that amount is allowed by the methodology, but there is a possibility to avoid it. Between Kapela Dvor and Terezino Polje, a gravel road runs in parallel to D5 public road, that used to be the former railway, from where the tracks were removed. It is a long straight road without any significant bend for the first 4,36 km. The quality level of its southern part is acceptable, but the northern end requires improvements both in terms of road surface condition and vegetation control. The road improves for the last 1,2 km long stretch until the D5 intersection in Terezino polje. The main route turns into east towards Katinka and Veliko Polje, while a detour creates connection to the riverside at the Drava bridge. There is an asphalted road between Terezino Polje and Veliko Polje described with very low traffic volume, followed by a gravel section as the route leaves public road 40009 at the end of Veliko Polje settlement. Then it turns into the direction of Rušani and Žlebina villages. After the asphalted Žlebina- Novi Gradac section, cyclists need to continue on unpaved surface for the next 25 km. The first section of this long stretch is a well rideable macadam road, approaches the river, then goes further until the oxbow Liman in Detkovac. A long (18,5 km) embankment part starts here all along to Kapinci, including numerous detours which help cyclists to the explore the riverbank and the oxbow lake in Budakovac. Despite some subsections could be challenging for cyclist, especially when weather conditions are unfavourable, the unpaved embankment is suitable for cycling in general. In Kapinci, the main route returns onto asphalt for the next 2,6 km, the good quality of the public road together with the very low traffic level provide comfortable ride. Shortly afterwards, the route heads to north, reaching the embankment again near Sopje. Swimming in the Drava river is forbidden even though local population is using a location here (E 595877 N 5077203) for this purpose on their own responsibility. This is the starting point of the next and last 10,5 km long embankment stretch between Sopje and Noskovci. Despite the quality of its first part need to be improved, this embankment section is also can be regarded as well rideable, thus there is no need to return to the asphalted public road. Two river viewpoints are approachable from the embankment, one of them is a place of a bird watching tower at Noskovci.



43. Figure: Typical unpaved road of the section

Considering that the route passes through small villages and uses long embankment sections without any settlement, the locations of different service providers along the daily stage especially important to be highlighted. Restaurants can be found in Kapela Dvor and Terezino Polje (Restaurant Graničar), besides the stage points, additional accommodations are in Detkovac (Kuća za odmor Dragutin Dečak) and Sopje (Hotel Višnjica (***)). Numerous settlements have shops to purchase food, beverages or other supplies: Gornje Bazje, Detkovac, Budakovac, Kapinci, Sopje, Noskovci. Cyclists can find bike repair facilities in Gornje Bazje (E 572825 N 5086038), Pustara Višnjica (E 587401 N 5071095), Sopje (E 596848 N 5074304) and at the end point Noskovci (E 603499 N 5072038).

4.10.4. Nature and river related values

River viewpoints:

- Terezino Polje, at the border bridge between Croatia and Hungary (E 574654 N 5089820).
- Novi Gradac- 1: (E 584001 N 5087898)
- Novi Gradac-2: (; E 584687 N 50873658)
- Liman (E 585413 N 5085029). – existing benches
- Budakovac-1 (E 589104 N 5080507)
- Budakovac-2 (E 587465 N 5079184) – existing resting place
- Vaška (E 590407 N 5078062)
- Kapinci (E 594019 N 5077471)
- Sopje (E 595898 N 5077194) – existing infra
- Noskovci (E 601691 N 5074271)
- Noskovci - birdwatching tower (E 604136 N 507237)



44. Figure: One of the many river viewpoints (Noskovci)

Additional nature experience:

- Educational trails: educational trail called “In the embrace of Drava”, equipped with info educational boards and bird-watching tower on the bank of the Drava river. The other educational trail presents the types of trees and shrubs of this protected park.
- Rivers’cool, constructed in frame of the Interreg Danube Transnational Programme coopMDD

Both of the sites are located at the Information and Educational Center in Noskovci (45.780263, 17.831099)

4.10.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all stages in Virovitica-Podravina County are the following:

- 3 large info boards
- 10 small info boards
- 1 resting place
- 5 bike racks
- 4 solar benches
- 5 service stations
- 100 signs (estimated number)

Regarding stage S10, 2 large info boards, 6 small info boards, 1 resting place, 4 service stations, 3 bike racks, and 3 solar benches will be placed. AoE Bike Trail equipment will be placed next to the existing infrastructure, where it is feasible – to supplement it and with project’s visibility markings to put emphasis on the Interreg Danube Transnational Programme.

Locations of the planned large info boards regarding stage S10:

- Kapela Dvor (start point). Coordinates: 45.889172, 17.420560

- Noskovci (end point). Coordinates: 45.780067, 17.831047

Locations of the planned small info boards regarding stage S10:

- Terezino Polje, at the new resting place near the soccer field. Coordinates: 45.934931, 17.460935
- Budakovac, at the existing resting place. Coordinates: 45.846895, 17.626203
- Noskovci, at the existing resting place. Coordinates: 45.779966, 17.830545
- Liman oxbow. Coordinates: 45.898777, 17.600709
- Sopje. Coordinates: 45.824565 17.736265
- Near the Drava river between Sopje and Noskovci (Crveni križ). Coordinates: 45.799575, 17.805709

Location of the planned resting place regarding stage S10:

- Terezino Polje, near the soccer field and the children's playground. Coordinates: 45.934931, 17.460935

Location of the planned service stations, bike racks and solar benches regarding stage S10:

- service station, bike rack, solar bench: Terezino Polje, at the new resting place. Coordinates: 45.934931 17.460935
- service station, bike rack, solar bench: Budakovac, at the existing resting place. Coordinates: 45.846895, 17.626203
- service station, bike rack, solar bench: Noskovci, at the existing resting place. Coordinates: 45.779966, 17.830545
- service station: Kapinci, at the existing resting place. Coordinates: 45.830221 17.710185

According to the elaborated road signposting documentation, signposts will be placed on 50 locations along the stage.

4.11. S11 Noskovci (HR) – Belišće (HR)

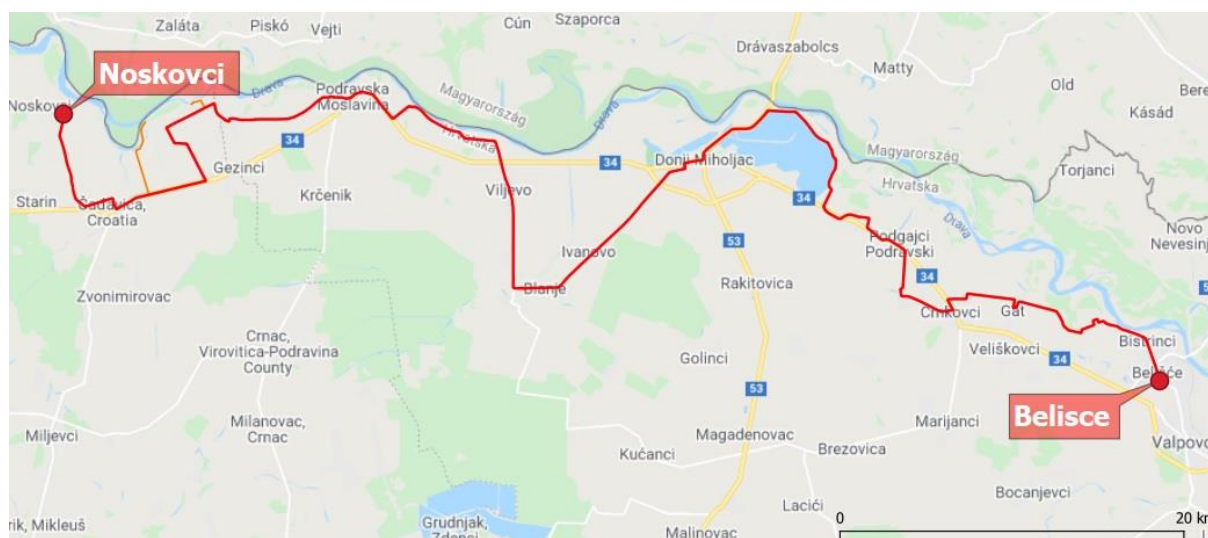
4.11.1. Basic information

Start point of the daily stage: Noskovci, Information and Educational Center. Coordinates: 45.780067, 17.831047

End point of the daily stage: Belišće, Ulica Kralja Tomislava, by the Theatre. Coordinates: 45.681604, 18.403815

Length of the daily stage: 73,9 km (31,54 km – 43 % is unpaved)

Length of the detour(s): 3,98 km (100 % is unpaved)



25. Figure: Map of S11 stage, Noskovci - Belišće

Noskovci is a small village, that is located very close to Drava river. Despite the shortage of accommodations in Noskovci, it is suited to be a stage point due to the available quantity is still higher compared to any other settlement in the surroundings. The Information and Educational Center has hostel type rooms, they provide bike repair facility. An exhibition on flora and fauna of the Mura-Drava-Danube Biosphere Reserve can be visited, and hiking to the Drava river is also possible (with guidance on demand). Wider range of accommodations and other services are available in Donji Miholjac and Slatina, and there is a restaurant, in Medinci. However, it requires a long additional distance to be completed from Noskovci in order to reach them.

Belišće and Valpovo are the highlighted settlements at the end of the stage. They have a lot of cultural sights, nice parks and good offer of accommodations and restaurants, while there are nice views on river Drava at the neighbouring settlement, Bistrinci. Bicycle repair shop also can be found in Belišće.

4.11.2. Short summary of the stage

This daily stage comprises various type and quality of roads. Cyclists need to ride on poor or better dirt roads, gravel, and asphalt surface as well, and the traffic level is also variable.

According to the methodology for route planning, the main goal regarding this stage had two components. Firstly, keep the trail as close as possible to the nature/river on appropriate quality roads. Secondly, avoid the main roads where the traffic volume is higher than it is allowed in the methodology. In practice, it meant that the road D34 had to be avoided. The total length of the stage is longer than an average AoE BT stage, thus Donji Miholjac might be an intermediate point for cyclist who do not able/want to complete the total distance in one day. Section between Donji Miholjac and Belišće mostly overlap with the existing “Drava bike route”, but in some cases better and safer solutions were found for the AoE bike trail.

4.11.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S11/1	Noskovci, Information and Educational Center 45.780067, 17.831047	Čađavica – west 45.745082, 17.842220	4,18 km	public road	asphalt	4024	393	***
S11/2	Čađavica – west	Čađavica – settlement 45.744101, 17.858499	1,65 km	uncategorised road	macadam (partly asphalt)			***
S11/3	Čađavica – settlement	Čađavica – east 45.749460, 17.875536	1,47 km	public road	asphalt	D34	2274	***
S11/4	Čađavica – east	Ilmin Dvor crossroads - main road nr. D34 45.754487, 17.905241	2,38 km	public road	asphalt	D34	2056	***
S11/5	Ilmin Dvor crossroads - main road nr. D34	Ilmin Dvor, north 45.768098, 17.895247	1,69 km	public road	asphalt	40042		***
S11/6	Ilmin Dvor, north	Ilmin Dvor, road to the river 45.781103, 17.904773	2,97 km	uncategorised road	dirt			**
S11/7	Ilmin Dvor, road to the river	Martinci Miholjački – end of the settlement 45.776807, 17.915210	1,28 km	uncategorised road	dirt			**
S11/8	Martinci Miholjački – end of the settlement	Martinci Miholjački – road nr. 44001 and agricultural road crossing 45.776061, 17.917489	0,19 km	public road	asphalt	44001		***

S11/9	Martinci Miholjački – road nr. 44001 and agricultural road crossing	Podravska Moslavina – end of settlement 45.784449, 17.978585	5,18 km	agricultural road	gravel, dirt			**
S11/10	Podravska Moslavina – end of settlement	Podravska Moslavina, southeast - road D34 and agricultural road crossing 45.776991, 18.002775	2,42 km	municipality road, public road	asphalt	D34	2274	***
S11/11	Podravska Moslavina, southeast - road D34 and agricultural road crossing	Viljevo, crossroads of D34 and 4031 45.761257, 18.059465	5,7 km	Water management road, embankment	gravel, dirt			**
S11/12	Viljevo, crossroads of D34 and 4031	Blanje, crossroads of 4031 and 44012 45.715442, 18.065803	5,16 km	public road	asphalt	4031		***
S11/13	Blanje, crossroads of 4031 and 44012	Ivanovo, crossroads of 44012 and 4032 45.728964, 18.108967	3,98 km	public road	asphalt	44012		***
S11/14	Ivanovo, crossroads of 44012 and 4032	Donji Miholjac, crossroads of 4032 and 4295 45.760894, 18.155110	5,27 km	public road	asphalt	4032		***
S11/15	Donji Miholjac, crossroads of 4032 and 4295	Donji Miholjac, crossroads of 4295 and D53 45.762111, 18.165090	0,79 km	public road	asphalt	4295	3227	***
S11/16	Donji Miholjac, crossroads of 4295 and D53	Border crossing point 45.778178, 18.196744	3,51 km	bicycle path	asphalt	D53	859	***
S11/17	Border crossing point	Sveti Đurađ, crossroads of water management road and D34 45.744812, 18.227657	5,09 km	water management road	gravel, dirt			**
S11/18	Sveti Đurađ, crossroads of water management road and D34	Sveti Đurađ, crossroads in the settlement -1 45.742098, 18.242413	1,37 km	streets in settlement	gravel			**

S11/19	Sveti Đurađ, crossroads in the settlement-1	Sveti Đurađ, crossroads in the settlement-2 45.737257, 18.250583	1,15 km	streets in settlement	asphalt			***
S11/20	Sveti Đurađ, crossroads in the settlement-2	Podgajci Podravski, crossroads of D34 and 44016 45.728964, 18.270395	1,87 km	public road	asphalt	D34	2274	***
S11/21	Podgajci Podravski, crossroads of D34 and 44016	Bočkinci, crossroads of 44016 and 44017 45.712203, 18.268491	1,96 km	public road	asphalt	44016		***
S11/22	Bočkinci, crossroads of 44016 and 44017	Črnikovci, crossroads of 44017 and D34 45.707460, 18.295514	2,24 km	public road	asphalt	44017		***
S11/23	Črnikovci, crossroads of 44017 and D34	Črnikovci, crossroads of D34 and Ul. Matije Gupca 45.711195, 18.292527	0,49 km	public road	asphalt	D34	2274	***
S11/24	Črnikovci, crossroads of D34 and Ul. Matije Gupca	Črnikovci, Ul. Matije Gupca – end of settlement 45.711437, 18.295679	0,24 km	street in settlement	asphalt			***
S11/25	Črnikovci, Ul. Matije Gupca – end of settlement	Gat, north 45.708093, 18.326835	3,1 km	agricultural roads	gravel, dirt			*
S11/26	Gat, north	Gat-Bistrinci-1 45.708198, 18.342494	1,41 km	agricultural road	gravel			***
S11/27	Gat-Bistrinci-1	Gat-Bistrinci-2 45.698944, 18.362416	2,02 km	agricultural road	dirt			*
S11/28	Gat-Bistrinci-2	Bistrinci, Braće Radić street 45.700696, 18.382938	2,22 km	agricultural road	dirt			*
S11/29	Bistrinci, Braće Radić street	Bistrinci, crossroads at the church 45.696237, 18.396549	1,21 km	streets in settlement	asphalt			***
S11/30	Bistrinci, crossroads at the church	Belišće, Ulica Kralja Tomislava, by the Theatre 45.681604,	1,71 km	bicycle path	asphalt			***

		18.403815					
DETOURS							
S11/D1	Čađavica – east	Čađavica, river viewpoint 45.775886, 17.873523	3,21 km	uncategorised road	macadam/dirt		**
S11/D2	Ilmin Dvor, road to the river	Ilmin Dvor, river viewpoint 45.782749, 17.898324	0,77 km	uncategorised road	dirt		**

14. Table: Subsections of S11 stage

The daily stage starts in Noskovci and runs south on road nr. 4024, which is a good quality asphalted road with very low volume of traffic. The trail does not intersect the main road D34 at the west end of Čađavica, but in the middle of the settlement. Until that point, cyclists need to ride on an agricultural road (macadam surface) north of the settlement, parallel to the main road. The route is continued on D34 until the intersection of the road to Ilmin Dvor, including a 3,21 km long detour from Čađavica to the river. Traffic volume here exceeds the allowed level (2000 AADT), but the solution is acceptable due to the trail goes inside settlements. From the north end of Ilmin Dvor the surface is unpaved again, the trail approaches river Drava on a medium quality agricultural (dirt) road. Before the county border there is another short detour that leads to the river, while the main route passes through Martinci Miholjački and remains on a same quality dirt road until the next village, Podravska Moslavina. This solution is reasonable in order to avoid main road D34. Because of the same reason, the trail returns onto unpaved agricultural roads for the stretch between Podravska Moslavina and Viljevo. Shortly afterwards, it has to go in south direction due to the main route and the Drava river run very close to each other between Viljevo and Donji Miholjac, without any road in the area north of the road D34. Both the traffic conditions and road surface are appropriate within this longer but safer section via Cret Viljevski, Blanje, Bockovac, Ivanovo compared to the direct connection on the main road. Croatian road authorities (Hrvatske ceste) made the tender for the reconstruction of the D34 main road (Podravska Moslavina – Valpovo – Osijek), reconstruction of the road will encompass separate bicycle path in full length along the road. Reconsideration of the route would be necessary after the realization of this development. Donji Miholjac is great mid-point of the stage to restore supplies or to use services. This is the last point where cyclists have a good chance to find accommodation, if they are not sure that they are able to complete the remaining distance to Belišće. The trail leaves Donji Miholjac towards the Hungarian border on road 53. It takes a right turn next to the building of border crossing point and starts a circle around the fishponds, which is a highlighted area of the section due to cyclists have the opportunity to observe birds in the wetland area. First part of the road here has paved (asphalt) surface, then turns into gravel/dirt afterwards, causing more challenge for cyclists.



46. Figure: Gravel part of the road around the fishing pond at Donji Miholjac

This water management road intersects road D34 at west of Sveti Đurađ, therefore cyclists need to continue on the main road for a short distance. As it enters the settlement, immediately turns right onto municipality streets, which is initially a medium quality gravel road, but a good quality asphalted one shortly afterwards. There is a lack of alternatives to avoid the main road after the east end of Sveti Đurađ, but later the possibility is given for that, thus the trail uses roads 44016 and 44107 between Podgajci Podravski and Črnkovci (via Bočkinci). In Črnkovci, the following section is a short, 0,5 km backwards on the main road over the Karašica creek, then it takes a right turn onto Matije Gupca street. This is the last asphalt road for a while, almost the entire remaining part of the daily stage will be unpaved. The first section towards Gat is especially challenging gravel road with bigger size of crushed stones, followed by an approximately 2 km dirt agricultural road. This subsection needs to be improved. Between Gat and Bistrinci, the first part is very good quality gravel road which followed by long (4,24 km) very poor-quality agricultural road again, then the trail returns onto asphalt surface after Sanctuary of St. Anne in Bistrinci. This area can offer some beautiful viewpoints of Drava river. After the church of Bistrinci, a separated bicycle path leads to the stage end point (Belišće), that is initially a two-way track, shared pedestrian/cycle path afterwards.

4.11.4. Nature and river related values

River viewpoints:

- **River viewpoint 1:** Čadavica, river viewpoint (Location: 45.775886, 17.873523)
- **River viewpoint 2:** Ilmin Dvor, river viewpoint (Location: 45.782749, 17.898324)
- **River viewpoint 3:** Bistrinci beach – one of the biggest and most beautiful sand beaches on Drava River (45°41'59.00"N 18°24'45.93"E)

Resting places on riverside:

- On the water management road between Podravška Moslavina and Viljevo (45°46'53.03"N 18°00'52.53"E).
- Bistrinci, Ulica Brače Radić. Small resting place on the riverbank of Drava, nice view of the river (45°41'59.20"N 18°23'34.33"E)



47. Figure: Resting place on the riverbank at Bistrinci

Additional nature experience:

Visitor centre Dravska priča in Noskovačka Dubrava (45°46'51.5"N 17°49'51.5"E). Exhibition on flora and fauna of the Mura-Drava-Danube Biosphere Reserve, natural and cultural values. Possibility of hiking to the Drava River, possibility of guidance.



48. Figure: The building of Information and Educational Center – hostel accommodation as well – in Noskovci

4.11.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all stages in Osijek-Baranja County are the following:

- 4 large info boards
- 3 small info boards
- 1 resting place
- 4 bike self-service repair stands

- 250 signs (estimated number)

Regarding stage S11, 2 large info boards (one of them is financed by budget of Virovitica-Podravina County), at least 1 small info board, and 1 bike repair stand will be placed.

Locations of the planned large info boards regarding stage S11:

- Virovitica-Podravina County: Noskovci (start point). Coordinates: 45.780067, 17.831047
- Osijek-Baranja County: Belišće (end point).

Locations of the planned small info boards regarding stage S11:

- Virovitica-Podravina County: Ilmin Dvor. Coordinates: 45.782802, 17.909732

Location of the planned bike repair stand regarding stage S11:

- Donji Miholjac, information point. Coordinates: 45.762787, 18.167247

According to the elaborated road signposting documentation signposts will be placed on 11 locations along the stage in Virovitica-Podravina County, this information is not known in case of Osijek-Baranja County.

Since, on this section of the route there are already existing bicycle resting points and service stations, there is no need to implement any new element in frame of the project. The list of existing bike resting points are:

1. Noskovci – Hostel Dravska priča
2. Donji Miholjac – city centre
3. Belišće – city centre

Existing service stations: Podravska Moslavina, Donji Miholjac, Podravski Podgajci, Gat, Bistrinci

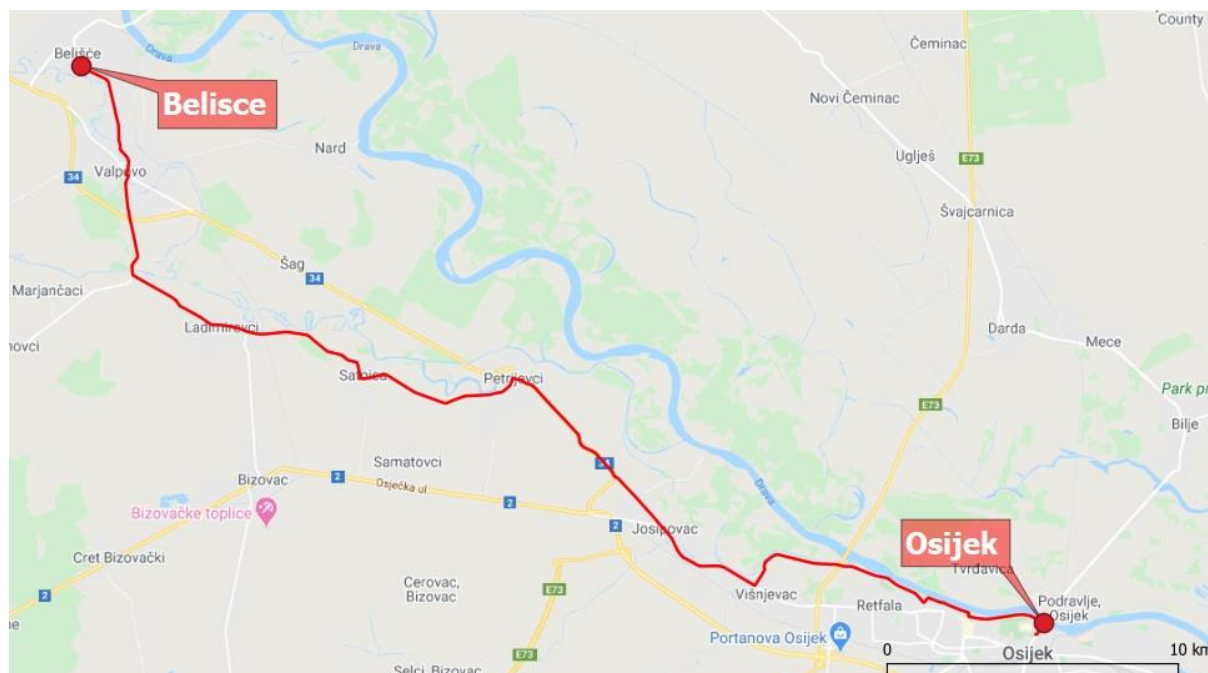
4.12. S12 Belišće (HR) – Osijek (HR)

4.12.1. Basic information

Start point of the daily stage: Belišće, Ulica Kralja Tomislava, by the Theatre. Coordinates: 45.681604, 18.403815

End point of the daily stage: Osijek, Franje Kuhača street (Tvrđa / Osijek Citadel) Coordinates: 45.559477, 18.698941

Length of the daily stage: 32,4 km (100 % paved)



49. Figure: Map of S12 stage, Belišće - Osijek

Belišće and Valpovo are the highlighted settlements at the end of the stage. They have a lot of cultural sights, nice parks and good offer of accommodations and restaurants, while there are nice views on river Drava at the neighbouring settlement, Bistrinci. Bicycle repair shop also can be found in Belišće.

Osijek is the fourth largest city in Croatia, and the most populated city along the planned AoE Bike Trail. It has a rich selection of accommodation as well as restaurants and other services, including bike related services (shops, repairs, service stations). The city is special point of the AoE bike trail, since this is the only place where the north and south routes meet, excepting the two entry points: Bad Radkersburg and Mohács.

4.12.2. Short summary of the stage

Due to local characteristics of road network, route planning is a challenging task in this area. The riverside territory does mostly contain bad quality agricultural roads or does not contain any type of roads at all. The creation of a continuous trail in close vicinity of the river – which is suitable for cycling at the same time – was not possible between Belišće and Osijek. In addition, main road D34 is the

closest existing road to the Drava, with acceptable surface, but high traffic level, which makes the planning process even more difficult. Regarding this stage the main purpose is/was to find the safest and well rideable connection between two stage points of the trail. Focusing on safety component basically meant to avoid the main route D34 which is extremely heavy in terms of traffic. The surface of total length of this stage is asphalt and does not contain any detours.

4.12.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S12/1	Belišće, Ulica Kralja Tomislava, by the Theatre 45.681604, 18.403815	Valpovo, north end of the pedestrian zone 45.660846, 18.418183	2,75 km	Bicycle path, public road, street in settlement	asphalt	4050	5678	***
S12/2	Valpovo, north end of the pedestrian zone	Valpovo, south end of the pedestrian zone 45.658182, 18.417848	0,3 km	pedestrian zone	asphalt			***
S12/3	Valpovo, south end of the pedestrian zone	Crossroads of 4052 and 4060 roads 45.636514, 18.419522	2,54 km	public road	asphalt	4052		***
S12/4	Crossroads of 4052 and 4060 roads	Ladimirevci, crossroads of 4060 and 4061 roads 45.624402, 18.454387	3,1 km	public road	asphalt	4060		***
S12/5	Ladimirevci, crossroads of 4060 and 4061 roads	Petrijevci, intersection of Matije Gupca Street and road D34 45.614442, 18.536833	7,38 km	public road	asphalt	4061		***
S12/6	Petrijevci, intersection of Matije Gupca Street and road D34	Josipovac, crossroads of D34, Osječka street 45.593021, 18.568040	3,54 km	public road	asphalt	D34	5562	***
S12/7	Josipovac, crossroads of D34, Osječka street	Josipovac, Bana Jelačića street and Lugarski put crossroads 45.569484, 18.611367	4,46 km	public road	asphalt			***
S12/8	Josipovac, Bana Jelačića street and Lugarski put	Josipovac, Lugarski put, Drava embankment	0,51 km	street in settlement	asphalt			***

	crossroads	crossing 45.573255, 18.614257						
S12/9	Josipovac, Lugarski put, Drava embankment crossing	Osijek, Promenade, Franjo Tuđman bridge crossing 45.561244, 18.700740	7,48 km	water management road, bicycle path	asphalt			***
S12/10	Osijek, Promenade, Franjo Tuđman bridge crossing	Osijek, Franje Kuhača street (Tvrđa) 45.559477, 18.698941	0,34 km	bicycle path	asphalt			***

15. Table: Subsections of S12 stage

The trail runs into south direction from Belišće, towards Valpovo on a separated, narrow bicycle path, that follows road nr. 4050 (Ul. kralja Tomislava) inside Belišće. Despite the speed limit inside the settlement, it is highly recommended to use the separated path since the traffic level of this road. There is no more bicycle path from the crossroads of Ulica Josipa Jurja Strossmayera and Antuna Branka Šimića, thus cyclists need to use settlement streets until the centre of Valpovo. After the car free zone, the trail keeps south directions on road 4052 (Ulica Ive Lole Ribara) instead of going on road 4051 (Osječka ulica). It runs via villages of Ladimirevci and Satnica, then reaches Petrijevci. After 2,5 km out of Valpovo on road 4052, the route passes over Vučica creek and immediately turns right onto road 4060. From this point, the traffic conditions become more favourable compared to road nr. 4052. The asphalted road between Ladimirevci- Satnica-Petrijevci is good quality and has low traffic. Despite of the fact that this route runs further from the Drava river compared to main road D34 (via Šag), it is reasonable due to safety considerations. Subsection of Petrijevci- Josipovac is one of the most challenging issue of the daily stage. Both main roads D34 and D2 have very high traffic level, while the quality of the agricultural roads is not acceptable. Furthermore, the track of A5 highway (and its extension) forms a “barrier” with very limited number of crossing points for roads to connect the two settlements. The trail turns onto D34 main road in Petrijevci, because of the lack of better alternatives, it has to remain on it even outside the settlement. Total of 3,5 km need to be accomplished on this road with high traffic until Josipovac, then the trail leaves D34 road a few hundred meters after the bridge over the highway. Croatian road authorities (Hrvatske ceste) made the tender for the reconstruction of the D34 main road (Podravska Moslavina – Valpovo – Osijek). The reconstruction of the road will result a separate bicycle path in full profile along the road. The route passes through Josipovac and enters Višnjevac on the main street (Osječka ulica, Ul. Nova Dalmacija, Ulica bana Josipa Jelačića) then turns north onto Lugarski Put. The end of the Drava embankment is an additional 0,5 km, cyclists can reach the city centre of Osijek directly from here. The asphalted embankment and bicycle path along the Drava River provide plenty of possibilities to view the Drava river and its oxbows. Moreover, they can

swim, or cross the river with cable ferry and visit the largest ZOO in Croatia, or many cultural sights of Osijek such as the co-cathedral, European Avenue or Tvrđa. This 7,5 km long stretch is motorized traffic free, allowed only for pedestrians and cyclists. At Franjo Tuđman bridge, the route turns south and reaches the end point Franje Kuhača street.



50-51. Figures: Start/end of asphalted embankment at Višnjevac (left); Promenad in Osijek along the Drava (right)

4.12.4. Nature and river related values

River viewpoints:

- **River viewpoint 1** – Drava observation spot (45°33'57.76"N 18°40'11.50"E) – view of the Drava River and the city, the ZOO. Possibility of crossing the river with a cable ferry (kompa) with bicycles (45°33'58.50"N 18°40'07.77"E)
- **River viewpoint 2** – pedestrian / bicycle bridge in Osijek – view of the Drava River and the panoramic view of the city of Osijek (45°33'49.05"N 18°41'09.87"E)

River access points:

- River access point 1 – Pampas beach. Popular “wild” sand beach on Drava River. Swimming, picigin, beach volleyball.
- River access point 2 – Copacabana beach. Biggest and most popular sand beach in Osijek. Beside swimming in Drava River, there are 4 swimming pools with various facilities (kid’s playground, cafes, mini golf, ping pong, beach volleyball, restaurant) (45°33'56.26"N 18°41'39.05"E)
- River access point 3 – Željo beach – popular sand beach by the railway bridge, possibility of swimming, volleyball, picigin (45°33'39.82"N 18°42'25.63"E)

4.12.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all stages in Osijek-Baranja County are the following:

- 4 large info boards
- 3 small info boards

- 1 resting place
- 4 bike self-service repair stands
- 250 signs (estimated number)

Regarding stage S12, 2 large info boards, 1 resting place, 1 bike repair stand will be placed.

Locations of the planned large info boards regarding stage S12:

- Belišće (start point)
- Osijek (end point)

Since Osijek is part of the northern and southern route at the same time, one large (special) two-sided info board will be installed, providing information about both the next north and south stages.

Locations of the planned small info boards regarding stage S12 is not defined yet.

Location of the planned resting place regarding stage S12:

- Osijek, Pampas beach on the Drava River. Coordinates: 45.575054 18.639979

Location of the planned bike repair stand regarding stage S12:

- Osijek, Pampas beach. Coordinates: 45.575054 18.639979

The exact number and locations of signposts will be known after the elaboration of the official road signposting documentation.

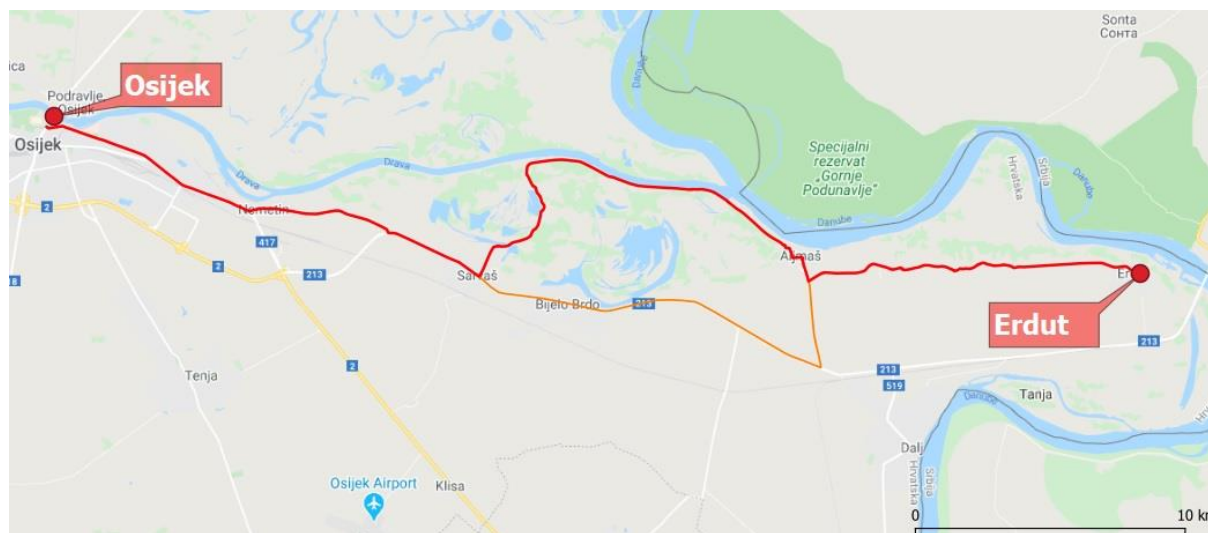
4.13. S13 Osijek (HR) – Erdut (HR)

4.13.1. Basic information

Start point of the daily stage: Osijek, Franje Kuhača street (Tvrđa / Osijek Citadel) Coordinates: 45.559477, 18.698941

End point of the daily stage: Erdut, castle Adamović. Coordinates: 45.524618, 19.062436

Length of the daily stage: 34,15 km (10,63 km – 31 % is unpaved)



52. Figure: Map of S13 stage, Osijek-Erdut

Osijek is the fourth largest city in Croatia, and the most populated city along the Amazon of Europe Bike Trail, thus visitors can find both the largest number of service providers and the widest variety of services here. Cyclists can easily find the most fitting option to fulfil their needs. Osijek has several bike friendly accommodations to stay, there are many of bicycle shops and repairs in the city, in addition, self-service bicycle repair stations are also available.

The other stage point is Erdut, that is the closest settlement to the border on the Croatian side. In terms of accommodations and services, this place is more modest compared to Osijek. Aljmaš is the neighbouring settlement, it can contribute with its accommodations and restaurants to widen the offers of the territory. Neither of the nearby villages has any bicycle shops, only self-service bicycle repair possibilities can be found in Erdut and Aljmaš.

4.13.2. Short summary of the stage

Since this daily stage follows the last kms of Drava river until the confluence with the Danube, it can be described as a special stage. Cycling on the forest/water management path is rewarding, at the end of it the confluence area of the two big rivers is a sight to enjoy. The picturesque villages of Aljmaš and Erdut are full of interesting views – overlooking the Danube from the small hilltops. Nice accommodation and restaurant facilities can be found along the trail, as well as recreational facilities such as hiking paths, canoeing, swimming or just enjoying the landscape.

Majority of the shorter daily stage has paved surface, includes only one subsection gravel road. The daily section does not contain any detours, but an alternative route between Sarvaš and Aljmaš for those rare occasions when the main route over the Drava-Danube confluence is flooded. Part of this section overlaps with Eurovelo 6.

Osijek and Erdut are connected by 3 trains per day. According to a previous agreement with the conductor, it is possible to transport bicycles on the train. Erdut train station is located 3 km from the centre of the settlement.

4.13.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S13/1	Osijek, Franje Kuhača street (Tvrđa) 45.559477, 18.698941	Osijek, Matije Gupca and Vukovarska streets crossing 45.550894, 18.733272	2,94 km	bicycle path	asphalt			***
S13/2	Osijek, Matije Gupca and Vukovarska streets crossing	Nemetin, Vukovarska and, Nemetin streets crossing 45.539280, 18.765663	3,06 km	public road	asphalt			***
S13/3	Nemetin, Vukovarska and, Nemetin streets crossing	Nemetin, Nemetin street and road D213 crossing 45.534345, 18.811792	3,78 km	public road	asphalt			***
S13/4	Nemetin, Nemetin street and road D213 crossing	Sarvaš, road D213-Dravska street crossing 45.524040, 18.842200	2,66 km	public road	asphalt	D213		***
S13/5	Sarvaš, road D213-Dravska street crossing	Sarvaš, Dravska street- water management / forest road crossing 45.530961, 18.847000	0,86 km	street in settlement	asphalt			***
S13/6	Sarvaš, Dravska street- water management / forest road crossing	Aljmaš, Water management / forest road- Dolica street crossing 45.530537, 18.945590	10,63 km	Water management / forest road	gravel			***
S13/7	Aljmaš, Water management / forest	Aljmaš, crossroads of Dolica and	0,26 km	street in settlement	asphalt			***

	road- Dolica street crossing	Zlatna streets 45.528376, 18.946528						
S13/8	Aljmaš Zlatna street, 4092 crossing	Aljmaš, crossroads of Zlatna street- road nr. 4092 45.528517, 18.949708	0,26 km	street in settlement	asphalt			***
S13/9	Aljmaš, crossroads of Zlatna street- road nr. 4092	Aljmaš, roads nr 4092 and 4093 crossing 45.522902, 18.951749	0,65 km	public road	asphalt	4092		***
S13/10	Aljmaš, roads nr 4092 and 4093 crossing	Erdut, castle Adamović 45.524618, 19.062436	9,05 km	public road	asphalt	4093		***
ALTERNATIVE ROUTE								
S13/A1- 1	Sarvaš, road D213- Dravska street crossing	Crossroad of D213 and 4093 45.502844, 18.956034	9,5 km	public road	asphalt	D213	1730	***
S13/A1- 2	Crossroad of D213 and 4093	Aljmaš, roads nr 4092 and 4093 crossing 45.522902, 18.951749	2,27 km	public road	asphalt	4093		***

16. Table: Subsections of S13 stage

Due to the existence of cycling related infrastructure in the city of Osijek, the first part of S13 stage can be completed on separated bicycle paths and shared walking/cycling paths, following cara Hadrijana and Matije Gupca streets until the intersection of Vukovarska street. Thus, the first 3 km from Osijek old town to the edge of the city ensures safe ride for cyclists, with limited chance for confrontation with motorized traffic. The following 3 km is shared with cars and trucks, then the trail leaves the main road and passes through the settlement of Nemetin. The traffic level from Nemetin to the intersection of the D213 main road is more favourable, while the next short stretch on D213 - west of Sarvaš - is one of the most challenging within this daily stage. After 2,6 km on main road D213, the trail reaches the inhabited area, where speed limit helps to make the section safer. Croatian road authorities (Hrvatske ceste) made a tender for reconstruction of the public road D213 between Nemetin – Erdut, thus a separated bicycle path is supposed to be added to the reconstructed road. Reconstruction works are going to start in 2020. After the settlement of Sarvaš, the trail turns into north direction at the crossroads of the main road and Dravska street. The surface of the road is changing from asphalt to gravel. This is the only, but longer (10,6 km) unpaved section of the stage, leading to Drava. After it approached the river, remains in its close vicinity in a longer distance and runs in parallel to it until the next settlement (Aljmaš). In the meanwhile, it provides many river views and opportunities to access the water surface, including

the confluence of the Danube and Drava rivers, which is a highlighted spot of the stage. This is a weekend resort, later the road surface turns into asphalt again as soon as the trail enters Aljmaš. The settlement offers various services (accommodations, restaurants) and great views of river Danube. Furthermore, there is an existing bicycle resting point with e-bike charging and repair possibilities at the south part of the settlement near the Calvary hill. The trail between Aljmaš and Erdut runs on road nr. 4093, it has good quality asphalt surface. The traffic level of this 9 km long section is very low, makes it optimal for cycling. There are a lot of scattered houses, vineyards and fruit plantations alongside the road, the next compact settlement is the stage point Erdut, where the fort offers great views of the surroundings and the Danube is also accessible. The stage contains a 11,7 km long alternative route from Sarvaš (via Bijelo Brdo) to south of Aljmaš, it is recommended to use if the main route is flooded. The alternative route uses D213 road in longer distance, which means that cyclists might have to face with higher traffic level.

4.13.4. Nature and river related values

Riverview and access points

- **River point 1** – Drava-Danube confluence – perfect spot where the two big rivers meet. Ideal for relaxation, swimming.
- **River point 2** – Aljmaš Calvary – nice view of the Danube River from the hill. Easy ascension to the top of the Aljmaš Calvary with resting point on the top.
- **River point 3** – Erdut fort – nice view of the Danube River from the hill. Old Erdut fort is placed on the top of the hill overlooking the Danube River. Easily accessible with bicycle.
- **River access point 1** – Željo beach – popular sand beach by the railway bridge, possibility of swimming, volleyball, picigin (45°33'39.82"N 18°42'25.63"E)
- **River access point 2** – Drava-Danube confluence – perfect spot where the two big rivers meet. Ideal for relaxation, swimming.



53-54. Figures: Danube-Drava confluence area (weekend resort Ušće); Erdut fort

Other nature experience points:

- Rivers'COOL facility, north of Sarvaš - location: 45.531611, 18.849692



55. Figure: Rivers'COOL facility, north of Sarvaš

4.13.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for all stages in Osijek-Baranja County are the following:

- 4 large info boards
- 3 small info boards
- 1 resting place
- 4 bike self-service repair stands
- 250 signs (estimated number)

Regarding stage S13, 2 large info boards, 2 small info boards will be placed.

Locations of the planned large info boards regarding stage S13:

- Osijek (start point)
- Erdut (end point)

Since Osijek is part of the northern and southern route as well, one large (special) two-sided info board will be installed, which provides information about both the next north and south stages.

Locations of the planned small info boards regarding stage S13:

- Danube-Drava confluence. Coordinates: 45.543063, 18.920963
- Sarvaš. Coordinates: 45.524159 18.842038

The exact number and locations of signposts will be known after the elaboration of the official road signposting documentation.

4.14. S14 Erdut (HR) – Apatin (SRB)

4.14.1. Basic information

Start point of the daily stage: Erdut (Croatia), castle Adamović. Coordinates: 45.524618, 19.062436

End point of the daily stage: Apatin (Serbia) city centre. Coordinates: 45.674167, 18.979084

Length of the daily stage: 35,51 km (15,49 km – 44 % is unpaved)

Length of the detour(s): 3,14 km (100% unpaved)



56. Figure: Map of S14 stage, Erdut - Apatin

Erdut is the closest settlement to the border on the Croatian side. In terms of accommodations and services, this place is more modest compared to Osijek. Aljmaš is the neighbouring settlement, it can contribute with its accommodations and restaurants to widen the offers of the territory. Neither of the nearby villages has any bicycle shops, only self-service bicycle repair possibilities can be found in Erdut and Aljmaš.

Apatin is a city located in the West Bačka District of autonomous province of Vojvodina. The city bears the marks of different ethnic groups and periods of history, it has rich historical, cultural, and built heritage. The population of the settlement is over 17 thousand people, the city has the capacity of accommodations and level of services, that make it suitable stage point. Different types of accommodations, several restaurants and pubs, shops, supermarkets and cycling related services, including bicycle shops and repairs are available in the city. There is no possibility of charging e-bikes. Besides private accommodations, hostel, hotels inside Apatin, “Banja Junakovic” SPA is located 5 km

east from the city with large number of beds, while a camping – Camping area Budžak – is situated 6 km north of the settlement.

4.14.2. Short summary of the stage

The stage mainly consists of traffic free embankment roads, passing through beautiful nature area, and asphalted public roads in a smaller proportion. It provides a close nature experience and many nice views for visitors. Major part of the daily stage is without any traffic. Since the route does not pass through any settlement between the start and end points, cyclists needed to be prepared that they will not be able to access any kind of services along the main route.

4.14.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S14/1	Erdut, castle Adamović 45.524618, 19.062436	Erdut, crossroads of 4093 and D213 45.508823, 19.064426	1,77 km	public road	asphalt	4093		***
S14/2	Erdut, crossroads of 4093 and D213	Erdut, border crossing 45.514506, 19.078135	1,36 km	public road	asphalt	D213	1730	***
S14/3	Erdut, border crossing	Bogojevo border crossing 45.529420, 19.088014	1,83 km	public road (Danube bridge)	asphalt	D213, 17		***
S14/4	Bogojevo border crossing	Crossroads - road nr.107 and embankment road 45.536164, 19.082857	1,03 km	public road	asphalt			***
S14/5	Crossroads - road nr.107 and embankment road	Dunav Sonta campsite 45.560117, 19.013122	6,5 km	embankment	asphalt			***
S14/6	Dunav Sonta campsite	Crossing gate on embankment (eastern) 45.560244, 19.005131	0,59 km	embankment	gravel			**
S14/7	Crossing gate on embankment (eastern)	Crossing gate on embankment (western) 45.558935, 18.967343	3,23 km	embankment	grass			*
S14/8	Crossing gate on embankment (western)	Crossroad to river Danube – 1 45.557860, 18.950128	1,35 km	embankment	asphalt			**

S14/9	Crossroad to river Danube – 1	Crossroad at the Hunting House "Mesarske Livade" 45.579315, 18.913572	4,16 km	embankment	asphalt			**
S14/10	Crossroad at the Hunting House "Mesarske Livade"	Crossroad to river Danube 2 45.593877, 18.921326	2,06 km	embankment	gravel			**
S14/11	Crossroad to river Danube 2	Start/end of embankment at Apatin 45.664657, 18.970593	9,61 km	embankment	gravel			**
S14/12	Start/end of embankment at Apatin	Start/end of promenade, Apatin 45.670485, 18.970119	0,66 km		gravel, paving-stones (partly)			***
S14/13	Start/end of promenade, Apatin	City center of Apatin 45.674167, 18.979084	1,36 km	municipality roads	asphalt			***
DETOURS								
S14/D1	Crossroad to river Danube – 1	River access point 1 45.541149, 18.938848	2,48 km	forest road	gravel, dirt			**
S14/D2-	Crossroad to river Danube 2	River access point 2 45.593291, 18.914202	0,66 km	forest road	gravel, dirt			**
ALTERNATIVE ROUTE								
S14/A1	Crossroads (road nr.107 and embankment road)	City center of Apatin (via Sonta)	22,79 km	public road	asphalt	107		***

17. Table: Subsections of S14 stage

The daily section starts in Erdut (Croatia), using public roads 4093 and D213 in 3,1 km length to reach the border crossing point between Croatia and Serbia. Last 1,3 km of this short section runs on a road with higher traffic level compared to other sections of the stage, but it is still fit to the methodology of route planning (<2000 AADT). The trail remains on public road on the Serbian side further 1 km, then it turns west onto the embankment road, which will be followed all along to city of Apatin. This is the entrance point of the Special Nature Reserve of "Upper Danube" area, that provides the experience to cycle in pure nature and enjoy the vicinity of Danube within the remaining kms of the daily stage. The road can be called traffic-free, visitors may occasionally meet insignificant number of vehicles. The first part (6,5 km) of the main route on embankment is asphalted road in good quality, leading to a campsite (Dunav Sonta campsite). This site is a beautiful river viewpoint and a good place to have a rest. The surface of the next 0,6 km on embankment is gravel, becomes grassy afterwards. The most challenging subsection in terms of road quality is a 3,2 km long stretch, its surface is covered by high grass, requires

improvement. The location of this part (section S14/7) can be defined well, due to booming barriers can be found on both ends of it. Further sections of the embankment contain asphalted and gravel/dirt parts as well, their quality is not homogeneous, but reach the acceptable level everywhere. The stage includes two short detours from the embankment to the river Danube. One of them goes to the confluence area of Danube and Drava rivers, while the other leads to a northern river viewpoint. In case of high water, the access of these sites can be problematic or not possible. Inside the city of Apatin, the route uses Ive Lole Ribara street to reach the end point of the stage at the city park.

Regarding the stage there are two major issues:

1. Road closure

During the hunting season, as well as deer mating season, the embankment road is periodically closed. It is restricted to move inside the territory from 25th of August to 15th September, thus to pass through the Special Nature Reserve of "Upper Danube" area is possible only from 10.00 am to 5.00 pm. It is strictly prohibited between 05.00 pm - 10.00 am due to hunting activity. Visitors should be informed properly about these restrictions through all the communicational channels. Furthermore, all the info boards planned to be placed here should emphasize this information as well. When it is not allowed to enter the area, cyclists can use an alternative route through Sonta and Svilojevo villages, which follows the road nr. 107 public road in 22,8 km total length.

2. Road condition in case of bad weather

Except one specific subsection (S14/7), the embankment road can be regarded as rideable by bicycle when the weather conditions are normal/dry. In case of bad/wet weather conditions, certain subsections of the embankment road – especially the unpaved, dirt sections - may easily become hardly rideable or not rideable at all by bicycle, therefore the above written alternative route should be advised for cyclists when the weather is constantly rainy.



57. Figure: Challenging section on embankment with high grass



58. Figure: Paved surface o nembankment at hunting house Mesarske livade



59-60. Figures: Better gravel (left) and dirt/grassy surfaces (right) on embankment in mid-section of the stage



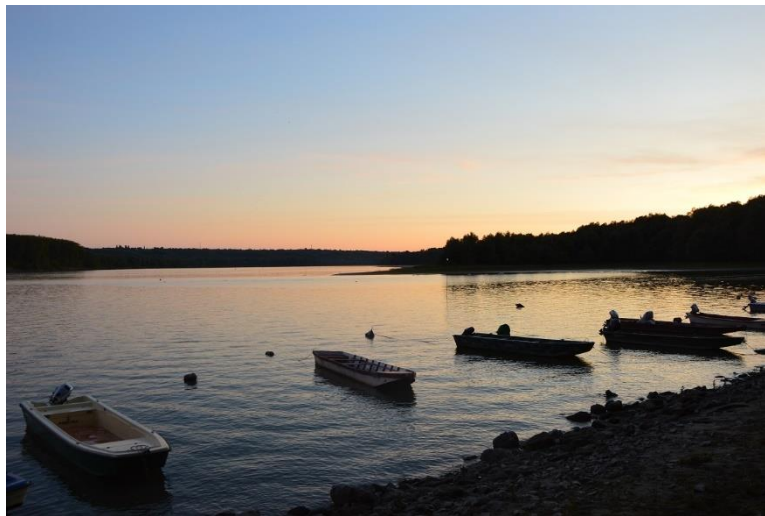
61-62. Figures: South entrance of Special Nature Reserve of "Upper Danube" (left); asphalted road at Svilojevo – part of the alternative road (right)

4.14.4. Nature and river related values

The stage almost in its full length offers a close nature experience, where visitors have great chance to observe or encounter with different animals. Richness of ornitofauna is part of the characteristic of the Danube including rare species such as white-tailed eagle and black stork. There are 51 species of mammals in the Reserve, 248 species of birds, 50 species of fish, 11 species of amphibians, 9 species of reptiles, a large number of invertebrates, out of which butterfly fauna with over 60 species of daily butterflies and more than 1 000 plant species. The “Upper Danube” inhabits the largest population of European deer in Serbia.

River view and access points:

- River viewpoint 1 - Bridge over the Danube (Serbia-Croatia border) - 45.524801, 19.084864
- River viewpoint 2 - Campsite near Sonta - 45.560117, 19.013122
- River viewpoint 3 - Confluence of Danube and Drava rivers - 45.541149, 18.938848
- River viewpoint 4 - 45.593291, 18.914202
- River viewpoint 5 – Apatin promenade - 45.669079, 18.969538



63. Figure: View of the Danube in sunset at Sonta campsite

4.14.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for stage S14 are the following:

- 4 large info boards (one of them is financed by the budget of Osijek-Baranja County)
- 1 resting place

Locations of the planned large info boards regarding stage S14:

- Osijek-Baranja County: Erdut (start point).

- Apatin (end point), city park in center of Apatin. Large info board with sitting elements and bike rack. Coordinates: 45.673 18.977
- Entrance into Special Nature Reserve "Upper Danube / Gornje Podunavlje. Large info board with sitting elements and bike rack. Coordinates: 45.536 19.081
- Apatin, orthodox church at Danube. Large info board with sitting element and bike rack. Coordinates: 45.669 18.969

Location of the planned resting place regarding stage S14:

- Camping area "Dunav Staklara"(NGO)on Danube riverside at Sonta. Resting area with sitting elements, table and bike rack. Coordinates: 45.559 19.012

The final number and the exact location of every signposts are not completely defined yet excepting 6 of them. Their locations are the following:

- Bogojevo border crossing (Serbia-Croatia) - 45.530 19.088
- Crossroads where the embankment meets the main route - 45.536 19.083
- At Sonta campsite - 45.560 19.013
- Crossroads in mid-stage - 45.558 18.950
- Crossroads at the Hunting House "Mesarske Livade" (45.579315, 18.913572)- 45.579 18.914
- In Apatin - 45.665 18.971

The final number of signposts is expected to be more than six.

4.15. S15 Apatin (SRB) – Sombor (SRB)

4.15.1. Basic information

Start point of the daily stage: Apatin (Serbia) city centre. Coordinates: 45.674167, 18.979084

End point of the daily stage: Sombor, city hall. Coordinates: 45.772659, 19.114206

Length of the daily stage: 36,3 km (7,49 km – 21 % is unpaved)

Length of the detour(s): 24,26 km (6,48 km – 27% is unpaved)



64. Figure: Map of S15 stage, Apatin - Sombor

Apatin is a city located in the West Bačka District of autonomous province of Vojvodina. The city bears the marks of different ethnic groups and periods of history, it has rich historical, cultural, and built heritage. The population of the settlement is over 17 thousand people, the city has the capacity of accommodations and level of services, that make it suitable stage point. Different types of accommodations, several restaurants and pubs, shops, supermarkets and cycling related services, including bicycle shops and repairs are available in the city. There is no possibility of charging e-bikes. Besides private accommodations, hostel, hotels inside Apatin, “Banja Junakovic” SPA is located 5 km east from the city with large number of beds, while a camping – Camping area Budžak – is situated 6 km north of the settlement.

The other stage point, Sombor is the administrative centre of West Bačka District in the autonomous province of Vojvodina, The city with more than 47 thousand population can provide all the needed services for cyclotourists with numerous accommodations, restaurants, bicycle related and other

services. Sombor has railway connection with Subotica which ensure accessibility for the bike trail from the Budapest-Belgrade axis. The daily number of trains is five in each direction.

4.15.2. Short summary of the stage

The entire length of 15th southern stage belongs to Serbia, it can be split into 3 different sections. First 14 km from Apatin is an asphalted embankment, which is allowed for motorized traffic, but its volume is very low therefore it is comfortable for cyclists. The second 7,5 km before Bački Monoštor is unpaved, while the remaining 14,5 km between Bački Monoštor and Sombor runs on asphalted public roads where the higher traffic level can be a factor. The stage contains considerable length of detours, including a connection to Sombor via Kupusina. This is listed as a detour, but rather can be described as an alternative route to reach the stage end point. This is a shortcut compared to the main route, which stays closer to the Danube in longer distance. Stage S15 can provide nature experience, the route is well-rideable in general, but public roads with higher traffic may requires more attention from cyclists' side.

4.15.3. Information about the route and its condition

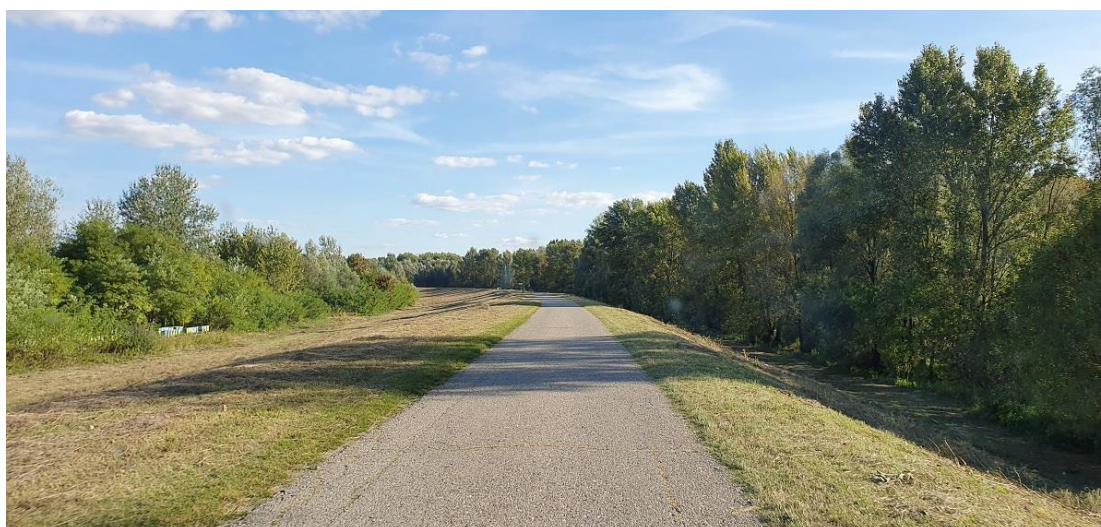
	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S15/1	City center of Apatin 45.674167, 18.979084	Dunavska ulica 45.674300, 18.971277	0,75 km	municipality roads	asphalt			***
S15/2	Dunavska ulica	Town beach, restaurant Plava Ruza 45.685239, 18.952972	2,08 km	bicycle path	asphalt			***
S15/3	Town beach, restaurant Plava Ruza	Charda „Harčaš“ 45.698860, 18.924863	2,78 km	embankment with low traffic	asphalt			***
S15/4	Charda „Harčaš“	Crossroads near Camping Apatin 45.716027, 18.915674	2,2 km	embankment with low traffic	asphalt			***
S15/5	Crossroads near Camping Apatin	Charda „Brunai“ 45.722836, 18.927461	1,55 km	embankment with low traffic	asphalt			***
S15/6	Charda „Brunai“	Charda „Pčela“ 45.722380, 18.942390	1,35 km	embankment with low traffic public road	asphalt			***
S15/7	Charda „Pčela“	DTD canal crossing point 45.730708, 18.979282	3,67 km	embankment with low traffic public road	asphalt			***
S15/8	DTD canal crossing point	Bački Monoštor south	7,49 km	forest road	gravel			**

		45.788549, 18.944280						
S15/9	Bački Monoštor south	Intersection- Monostorski Put and road 15 Sombor-Bezdan 45.784784, 19.083319	11,38 km	public road with medium traffic	asphalt	405		***
S15/10	Intersection- Monostorski Put and road 15 Sombor- Bezdan	Sombor, intersection Laze Kostića and Venac Petra Bojovića 45.771340, 19.112221	2,74 km	public road	asphalt	15		***
S15/11	Sombor, intersection Laze Kostića and Venac Petra Bojovića	Sombor, city hall 45.772659, 19.114206	0,31 km	municipality roads	asphalt			***
DETOURS								
S15/D1	Town beach, restaurant Plava Ruza	Town beach, river viewpoint 45.683498, 18.953372	0,27 km		asphalt, dirt mix			***
S15/D2	Charđa „Harčaš“	River viewpoint 2 45.696249, 18.920264	0,51 km	forest road	dirt			**
S15/D3	Crossroads near Camping Apatin	Riverbank, river viewpoint 3 45.713154, 18.908005	1,18 km		dirt			**
S15/D4-	DTD canal crossing point	Štuka čarda 45.735098, 18.958588	2,15 km	forest road	dirt			**
S15/D5- 1	DTD canal crossing point	Intersection road 107 south of Kupusina 45.731581, 19.050647	6,31 km	public and municipality roads	asphalt			***
S15/D5- 2	Intersection road 107 south of Kupusina	Bridge over the canal, southwest of Sombor 45.756245, 19.095231	4,45 km	public road	asphalt	107		***
S15/D5- 3	Bridge over the canal, southwest of Sombor	Sombor, intersection Laze Kostića and Venac Petra Bojovića 45.771340, 19.112221	2,18 km	bicycle path	asphalt			***
S15/D5- 3a	Bridge over the canal, southwest of Sombor	River viewpoint south of the bridge (Tromeđa) 45.740288, 19.116366	2,77 km		asphalt, dirt			**
S15/D5-	Bridge over the canal,	River viewpoint,	2,51 km		asphalt,			***

3b	southwest of Sombor	north of the bridge 45.759572, 19.067483			paving stones			
S15/D6	Sombor, intersection Laze Kostića and Venac Petra Bojovića 45.771340, 19.112221	Sombor, intersection Venac Radomira Putnika and Radisceva 45.775212, 19.114859	1,39 km	bicycle path	asphalt			***
S15/D6- 2	Sombor, intersection Venac Radomira Putnika and Radisceva	Sombor, intersection Venac Petra Bojovića and Venac Radomira Putnika 45.772862, 19.109018	0,54 km	municipality road	asphalt			***

18. Table: Subsections of S15 stage

First part of the stage consists of municipality roads inside Apatin, and a 2 km long separated bicycle path to the town beach where a short detour makes it possible to approach the riverside of Danube. The route runs on embankment from here. There is an asphalted road on its top, that is allowed for motorized vehicles, but the volume of traffic is very low. However, the width of the road surface is much narrow compared to the previous part between the city and the beach. Road conditions remain unchanged within the next 11,5 km distance up to the Danube–Tisa–Danube (DTD) Canal. There are at least three possibilities (in form of detours) to reach the river, neither of them is longer than 2,2 km in one way, but all of them is unpaved. Since this part of the daily stage passes through forest area, it is a well rideable and nature close section at the same time, with several sites where cyclists can spend time to explore the surroundings. Besides the river viewpoints, many places called “Čarda” can be found where locals can gather to eat, drink and to spend free time together close to nature.



65. Figure: Embankment with asphalt road between Apatin and DTD canal

The crossing point over the DTD canal is an important intersection in relation to the stage, the main route turns into north direction towards Bački Monoštor, while a detour goes to east via Kupusina. Both routes lead to Sombor, but the main route is focusing to stay closer to the riverside area for additional kms, while the detour can be regarded as a short cut in this case. Everyone who stays on the main route, can expect to cycle on 7,5 km unpaved surface. The quality of some parts of the section is not perfect, but the whole section between the DTD canal and Bački Monoštor can be classified as acceptable. The route runs very close to the canal, cyclists can find opportunities to take a closer look on it. When the trail arrives at the edge of Bački Monoštor, it takes a right turn onto an asphalt road which will be followed until Sombor. This section means 14 km cycling to reach the centre of the town, cyclists have to pay attention to traffic. According to data it is below the crucial level defined in the route planning methodology, but it is much higher compared to previous sections of the daily stage. Even trucks can easily appear. The trail spends the last kms on public road nr. 15. inside city of Sombor, then turns left at the intersection of Laze Kostića and Venac Petra Bojovića streets, and finally reaches the stage end point that is located in front of the city hall.



66. Figure: Asphalt road with very low traffic west of Kupusina

The detour via Kupusina leaves the village on Somborski put and arrives at the intersection of public road 107. This road between Apatin and Sombor also can be described as busy, cyclists need to ride more than 2 km on this road before they enter the city. Speed limit makes the road safer inside Sombor, after additional 2 km the trail crosses over the canal. At this point, there are three different ways to go. The opportunity is given to explore the riverside of the canal both in northwest and southeast directions from the bridge. 1,4 km long separated bicycle path ensures the connection of the canal bridge with the centre of Sombor, which is a comfortable way for the last kms of the stage. In addition, 1,4 km good quality bicycle path is also part of the route in the centre of Sombor.

4.15.4. Nature and river related values

River view and access points:

- **River viewpoint 1** – town beach Apatin, coordinates: 45.683498, 18.953372
- **River viewpoint 2** – north of Apatin, coordinates: 45.696249, 18.920264
- **River viewpoint 3** – north of Apatin 2, coordinates: 45.713154, 18.908005
- **River viewpoint 4** – Danube – Tisa – Danube canal, coordinates: 45.730601, 18.978387
- **River viewpoint 5** – north of DTD canal (Štuka čarda), coordinates: 45.735098, 18.958588
- **River viewpoint 6** – Sombor (canal) 1, coordinates: 45.759572, 19.067483
- **River viewpoint 7** – Sombor (canal) 2, Tromeda. coordnates: 45.740288, 19.116366

4.15.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for stage S15 are the following:

- 4 large info boards (one of them is financed by the budget of City of Sombor)
- 2 small info boards
- 3 resting places

Locations of the planned large info boards regarding stage S15:

- Apatin (start point), city park in center of Apatin. Large info board with sitting elements and bike rack. Coordinates: 45.673 18.977
- "Bee charda"- "Pčela" or "Kupusinska čarda". Large info board with sitting elements and bike rack. Coordinates: 45.722 18.942
- Bridge over the canal Danube-Tisa-Danube. Large info board with sitting elements and bike rack. Coordinates: 45.730 18.978
- City of Sombor: Sombor, City hall (end point) Coordinates: 45.772780 19.114036

Location of the planned small info boards regarding stage S15:

- Sombor, Tromeda. Coordinates: 45.740865 19.117238
- Sombor, Museum. Coordinates: 45.771899 19.111863

Locations of the planned resting places regarding stage S15:

- Apatin, city beach. Resting place with sitting elements, table and bike rack. Coordinates: 45.683 18.951
- Sombor, Tromeda. Resting place with large bench, 2 bicycle racks. Coordinates: 45.740865 19.117238

- Sombor, Museum. Resting place with sitting element and table, 2 bicycle racks. Coordinates:
45.771899 19.111863

The final number and the exact location of every signposts are not completely defined yet excepting 11 of them belong to Municipality of Apatin. Their locations are the following:

- Apatin, centre - 45.674 18.973
- At Apatin city beach - 45.685 18.953
- 1 km further from Apatin city beach on embankment - 45.688631, 18.940484
- Charda „Harčaš“, future Visitors' center - 45.699 18.925
- Crossroads near camping site - 45.716 18.916
- Charda „Brunai“ - 45.722773, 18.928022
- Charda „Pčela“ - 45.722 18.943
- Intersection near bridge over the channel Danube – Tisa – Danube (DTD) - Apatin, Bački Monoštor, Kupusina - 45.731 18.979
- Crossroads between Kupusina and Bački Monoštor - 45.767847, 18.966602
- Entrance of Bački Monoštor - 45.789 18.944
- Centre of Bački Monoštor

Number and locations of road signposts regarding the section of S15 daily stage belongs to City of Sombor are not defined yet.

4.16. S16 Sombor (SRB) – Mohács (HU)

4.16.1. Basic information

Start point of the daily stage: Sombor (Serbia), city hall. Coordinates: 45.772659, 19.114206

End point of the daily stage: Mohács (Hungary), Szent János street (ferry port); Coordinates: 45.992770, 18.693759

Length of the daily stage: 60,4 km (17,67 km – 29 % is unpaved)

Length of the detour(s): 21,11 km (7,27 km – 34 % is unpaved)



67. Figure: Map of S16 stage, Sombor - Mohács

Sombor is the administrative centre of West Bačka District in the autonomous province of Vojvodina. The city with more than 47 thousand population can provide all the needed services for cyclotourists with numerous accommodations, restaurants, bicycle related and other services. Sombor has railway connection with Subotica which ensure accessibility for the bike trail from the Budapest-Belgrade axis. The daily number of trains is five in each direction.

Mohács on the Hungarian side is the end point of the Amazon of Europe Bike Trail, both the northern and the southern routes finish here. The small town is rich in spiritual and built heritage. It offers plenty of facilities for visitors, sacral heritage, gastronomy, sport opportunities (kayak, canoe, bike) and motorboat excursion to the border area.

4.16.2. Short summary of the stage

The last stage of the southern route includes 60 km main route and 21 km of detours, one third of it runs on unpaved surface. The main route is a relatively direct connection between the two stage points, consisting of asphalted public roads on the Serbian side, and a longer embankment section on the Hungarian side. Considering the long total length (main route and detours altogether) and the position of the detours compared to the main route, every kms of the daily stage may be challenging to be completed for some cyclists within one day. Therefore, the importance of daily itinerary planning beforehand can be emphasized. Cyclists end in Újmohács, where need to use the ferry to get the city on the other side of river Danube.

4.16.3. Information about the route and its condition

	Start point	End point	Length	Type of road	Type of the surface	Road no.	Traffic (AADT)	Quality
MAIN ROUTE								
S16/1	Sombor, city hall 45.772659, 19.114206	Sombor, intersection Laze Kostića and Venac Petra Bojovića 45.771340, 19.112221	0,31 km	municipality roads	asphalt			***
S16/2	Sombor, intersection Laze Kostića and Venac Petra Bojovića	Intersection- Monostorski Put and road 15 Sombor-Bezdan 45.784784, 19.083319	2,74 km	public road	asphalt	IB-15		***
S16/3	Intersection- Monostorski Put and road 15 Sombor- Bezdan	Bridge, east of Bački Monoštor 45.788386, 18.957960	10,29 km	public road with medium traffic	asphalt	O-405		***
S16/4	Bridge, east of Bački Monoštor	Bački Monoštor, north 45.806050, 18.937473	2,72 km		dirt			*
S16/5	Bački Monoštor, north	Bezdan, north 45.854704, 18.921004	6,05 km	public, road, municipality roads	asphalt	O-405		***
S16/6	Bezdan, north	Border crossing Bački Breg – Hercegszántó 45.930592, 18.935395	9,48 km	public road	asphalt	IB-15		***
S16/7	Border crossing Bački Breg - Hercegszántó	Hercegszántó, south 45.940874, 18.944154	1,35 km	public road	asphalt	51		***
S16/8	Hercegszántó, south	Hercegszántó, centre 45.949374,	1,46 km	municipality roads	asphalt			***

		18.931321						
S16/9	Hercegszántó, centre	Budzsák 45.943297, 18.876289	4,36 km	public road	asphalt	5151		**
S16/10	Budzsák	Embankment, southwest of Hoduna 45.916991, 18.819727	6,29 km	public road	asphalt	51148		**
S16/11	Embankment, southwest of Hoduna	Mohács, intersection of Szegeci út and embankment 45.997659, 18.702302	14,95 km	embankment	gravel			**
S16/12	Mohács, intersection of Szegeci út and embankment	Mohács, ferry 45.995575, 18.697929	0,4 km	public road	asphalt	5107		***
DETOURS								
S16/D1	Bački Monoštor north	Bački Monoštor south 45.788549, 18.944280	3,89 km	public road	asphalt			***
S16/D2- 1	Bezdan, north	Intersection-1 road nr. 16 45.856693, 18.871700	3,75 km	public road	asphalt	IB-16		***
S16/D2- 2	Intersection-1 road nr.16	Intersection-2 – road nr 16 . 45.855531, 18.865226	0,61 km	public road	asphalt	IB-16		***
S16/D2- 2a	Intersection-1 road nr.16	River viewpoint 1, south of Bački Breg 45.905397, 18.887845	7,17 km		dirt			**
S16/D2- 3	Intersection-2 – road nr 16	Intersection 3 – road nr 16 45.852138, 18.865683	0,42 km	public road	asphalt	IB-16		***
S16/D2- 3a	Intersection-2 – road nr 16.	Čarda "Pikec", river viewpoint 2 45.860496, 18.858548	1,09 km		asphalt			***
S16/D2- 4	Intersection 3 – road nr 16	Intersection to river, near Danube bridge 45.844972, 18.862674	1,02 km		asphalt			***
S16/D2- 5	Intersection to river, near Danube bridge	Intersection to Daraži Fok 45.822073, 18.857426	2,96 km		asphalt road on embankment			***
S16/D2-	Intersection to river,	Čarda and river	0,2 km		asphalt, dirt			**

5a	near Danube bridge	viewpoint 3 45.845290, 18.860554						
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19. Table: Subsections of S16 stage

The main route of the daily stage follows the Sombor - Bački Monoštor - Bezdán - Bački Breg direction in Serbia, then approaches Mohács via Hercegszántó in Hungary. Almost the entire length of the planned S16 AoE BT daily stage is part of the EuroVelo network (EV 6). According to the initial plans the most direct connection was intended to be selected between the two stage points as main route, using public road nr 15. all along the Serbian part. This idea has been changed because of two reasons: firstly, volume of traffic on public road nr. 15 between Bezdán and Sombor exceeds the limit defined in the methodology. Secondly, Backo Podunavlje Biosphere Reserve is a highlighted area of the stage from nature perspective. It is the largest conserved floodplain complex in the upper course of the Danube River in Serbia, and one of the most undisturbed river and wetland regions in the whole Danube river basin. The unique landscape, precious biological diversity and rare natural habitats makes it a great attraction for tourists. Regard to the concept of the Amazon of Europe Bike Trail, it is reasonable to visit this area, despite of the fact that the total distance of the stage is increased by this. Due to the above described reasons, the trail uses road 405 (Sombor- Bački Monoštor-Bezdán) instead of road 15 (Sombor-Bezdán) direct connection.



68. Figure: Cyclists on asphalted road between Bački Monoštor and Sombor

First 13 km of the stage overlaps with the previous S15 stage, mainly public roads with low or medium traffic. The trail leaves the public road when it has crossed the bridge over the canal 1 km before Bački Monoštor. There are some tables with benches, a beach volleyball court, and a small pier on water, ensuring river access. The area is great site for recreational purposes. The main route bypasses the settlement of Bački Monoštor and runs alongside the canal, then returns onto public road 405. This is a 2,72 km long unpaved section surrounded by weekend houses, the quality of the road is one of the most

challenging in the entire stage. However, it stays very close to the water surface and passes through forestry area.



69-70. Figures: Pictures on section east of Bački Monoštor (2,7 km long unpaved road)

The length of the public road between Bački Monoštor and Bezdán is 6 km. As the trail crosses the intersection of roads 15 and 405, it turns left on the first municipality road (Petefi Šandora street) and runs along the side of the canal. A resting place and an info board are planned to be installed here, in frame of the project. Few hundred meters further, the road arrives at the intersection of public road nr. 16, that connects Bezdán with the Croatian-Serbian border (Batina). The longest detour of the stage starts here (left turn), leading to the Danube. The main route turns right here, then left after 40 meters afterwards at the first possibility. This is public road nr. 15 again, which has to be followed for the remaining 9,5 km in Serbia. The section passes through two settlements before the Hungarian border: Kolut and Bački Breg. Hercegszántó is first village on the Hungarian side, it is located within 1,5 km range from the border crossing point. Cyclists need to ride on municipality road Dózsa György street and public road nr. 5151 in order to go through the settlement, several food shops can be found on the way. Distance to go on this public road is more than 4 km until Budzsák⁴, then the trail turns left and crosses the bridge over Karapanca main canal. It passes by the hunting castle and continues towards the Danube embankment. The road remains asphalted all the way (6,3 km) to the flood protection embankment, but the quality of the asphalt is worse compared to previous sections. The final longer section before Mohács is a 15 km long embankment in parallel to river Danube, its surface is unpaved, while its quality is acceptable but could be difficult with bicycles any tyres more suitable for paved surfaces. Instead of the embankment, the public road nr. 5151 could be an option for cyclists with inappropriate equipment or looking for time-saving alternatives. At last, cyclists need to cross the Danube, ferries run from 6 am to 8 pm in every half an hour during summer months.

S16 stage has extended “network of detours” focusing on the side of Danube west of Bezdán (S16-D2). Main track of the detour comes from Bezdán and ends at a river viewpoint called “Daraži Fok”, it is located 3 km south of the Danube bridge at Batina. Between these two points, it consists of two different type of roads: a public road (4,8 km) and embankment with good quality asphalted road on its top (4

⁴ administratively part of Hercegszántó

km). Moreover, there are three additional possibilities within this distance to reach different sites, including Monument and Museum of Batina battle. The longest is the only one where cyclists have to ride on dirt roads, others have asphalt surface. Regard to the position and many stretches of this detour in different directions, integration of all of them into a daily itinerary might be questionable for an average cyclist. If someone has the intention to go along on every meter of the detour, it would mean total 34 km additional distance to cycle beyond the length of the main trail. In many cases selection among them could be important in order to be able to complete the total 60 km of main route.

4.16.4. Nature and river related values

River view and access points:

- **River viewpoint 1** – Bački Monoštor, Čarda Monoštorka. Coordinates: 45.788738, 18.958759
- **River viewpoint 2** – Bezdan, canal. Coordinates: 45.851256, 18.920497
- **River viewpoint 3** – Rivers' Cool northwest of Bezdan. Coordinates: 45.894351, 18.869708
- **River viewpoint 4** – Čarda Pikec. Coordinates: 45.860651, 18.858111
- **River viewpoint 5** – Čarda near the bridge. Coordinates: 45.845298, 18.860066
- **River viewpoint 6** – Daraži Fok. Coordinates: 45.823559, 18.856057
- **River viewpoint 7** – Mohács, ferry. Coordinates: 45.995575, 18.697929



71-72. Figures: Great Bačka Canal near Bački Monoštor (left) and the view of Danube and Batina from the Monument and Museum of Batina battle (right)

4.16.5. Planned locations of the Amazon of Europe Bike Trail related infrastructure

According to plans, new AoE BT infrastructure elements for stage S16 are the following:

- 2 large info boards
- 4 small info boards
- 3 resting places

Locations of the planned large info boards regarding stage S16:

- City of Sombor: Sombor, City hall, Tourism Organization (start point) Coordinates: 45.772571 19.114378
- Mohács (end point), Szent János street (ferry port). Coordinates: 45.992770, 18.693759

Locations of the planned small info boards regarding stage S16:

- Rivers' Cool northwest of Bezdan. Small info board with 2 bicycle racks. Coordinates: 45.894349 18.869675
- Bački Monoštor. Coordinates: 45.79252 18.9331
- Bezdan, at the canal. Coordinates: 45.852103 18.920472
- Bezdan, Monument and Museum of Batina battle. Coordinates: 45.849896 18.860614

Locations of the planned resting places regarding stage S16:

- Bački Monoštor. Resting place with 2 bicycle racks. Coordinates: 45.79252 18.9331
- Bezdan. Resting place with small bench, 2 bicycle racks at the canal. Coordinates: 45.852103 18.920472
- Bezdan, Monument and Museum of Batina battle. Resting place with sitting element, table and 2 bicycle racks. Coordinates: 45.849896 18.860614.