

EuroVelo

the European cycle route network

European Certification Standard
Handbook for route inspectors



April 2018



European Certification Standard – handbook for route inspectors

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The “European Certification Standard Manual – handbook for route inspectors” explains the categories and criteria for monitoring the quality level of EuroVelo routes. It is an internal document to be used by EuroVelo route inspectors and National EuroVelo coordinators. For a quick introduction to basic principles and criteria of the European Certification Standard (ECS), see the [short manual](#), published within the EuroVelo manual series for a broader public.

The first edition of the manual has been developed within the EU-funded INTERREG NWE IVB project “Demarrage”. This manual has been subsequently updated in the frame of the following EU-funded projects:

- EuroVelo 5 – Via Romea Francigena
- EuroVelo 8 – MedCycleTour
- EuroVelo 10 – Biking South Baltic
- EuroVelo 1 – Atlantic Coast

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1 Goals, definitions and contents

1.1 Goals

The main goals of the European Certification Standard (ECS) are:

- Improve the quality of EuroVelo, the European cycle route network, and other routes by identifying critical deficiencies and motivating decision-makers to invest in solutions to the identified problems.
- Provide quality control to motivate different target groups with varying levels of experience to use the certified trans-national routes.

1.2 Definitions

1.2.1 EuroVelo

EuroVelo – the European cycle route network – was initiated by the European Cyclists’ Federation (ECF) to develop a network of high-quality cycling routes linking all countries in Europe. It can be used by long-distance cycle tourists as well as by local people making daily journeys.



At the time of writing, there were 15 EuroVelo routes with a total length of over 70,000 km. North-South routes are identified by odd numbers, East-West routes and circuits by even numbers.

1.2.2 Application of the European Certification Standard

It is important to note the difference between route survey and certification.

- **Survey** is the process of collecting and evaluating route data described in this manual. A survey is always required for the certification of EuroVelo routes, but it can also be used outside the EuroVelo network or at an early development stage to identify investment needs.
- **Certification** is a confirmation that the route meets criteria set in the European Certification Standard. Only EuroVelo routes in their entirety or their major sections (at least 300 km long and with clearly defined origins and destinations, e.g. major cities or attractions) can be certified. The certification will remain valid for five years before it has to be renewed, but the main characteristics should be monitored regularly (yearly). After five years the complete route should be assessed again by using the same methodology (including survey).

The basic units of data collection for survey and certification are:

- **Minor sections:** 1 km in length¹
- **Daily sections:** between 30 and 90 km in length.²

Other terms commonly used in this manual include:

- **(ECS) app** – application for smartphones used to collect data during the field work.
- **(Route) inspector** – person performing the field work during the survey who completed the EuroVelo Route Inspector training.
- **Route evaluation report** – a summary of survey findings, both collected with the ECS app and in other ways.

1.2.3 Target groups

The assessment process has been developed from the perspective of the route users, not from the perspective of route operators, infrastructure managers or public administration. According to the “Route Development Manual for EuroVelo routes”, potential EuroVelo Route users are:

1. Cyclists on cycling holidays
2. Holiday cyclists, cycling during an otherwise “non-cycling” holiday
3. Cyclists on day trips for leisure
4. Commuters and daily cyclists
5. Sporting and fitness cyclists.

However, as it is impossible to predict a homogenous spread of these groups across a network of more than 70,000 km, the European Certification Standard will take into account three simplified groups of cycle tourists – “Regular”, “Occasional” and “Demanding”:

- **Regular cycle tourists:** cyclists with a great deal of experience in everyday cycling and cycle holidays. They are skilled, physically fit and able to choose their routes and accommodation in a flexible way. The quest for new experiences is a major motivation for this kind of cyclist.
- **Occasional cycle tourists:** cyclists with basic expertise in cycling who are maybe used to cycling but are not too skilled and/or have an average physical condition and therefore require safe and comfortable routes as well as good quality, frequent accommodation and

¹ In exceptional cases, minor sections can be shorter than 1 km. This includes the last minor section of a daily section, or e.g. a minor section leading to a ferry terminal, to avoid having a minor section stretching along both sides of a strait.

² Adapting the standard length of a section to around 60 km whenever possible is highly recommended.

information. The quest for recreation while performing a leisure trip by bike is a major motivation for these people.

- **Demanding cycle tourists:** users showing the most urgent demand for safe and comfortable routes. Amongst the users of EuroVelo routes are families with young children – some of them using bike trailers – as well as users of multi-wheeled vehicles such as hand bikes.



1.3 Criteria and categories for evaluation

The criteria for the assessment are be categorised according to different types of route elements:

- Infrastructure
- Services
- Promotion

A distinction between Essential, Important and Additional criteria has been made to reflect the different needs of different user groups. The basic assumptions are:

Essential criteria	Catering to regular cycle tourists	Must be met along the entire route
Important criteria	Catering to occasional cycle tourists	Must be met along at least 70% of the route
Additional criteria	Catering to demanding cycle tourists	Meeting the criteria is optional and depends on the aspiration level

Note that not all the data categorised in this manual and collected during the survey is already forms part of the certification criteria. However, it can be used for monitoring the route development, comparisons with other certification systems or communications.

2 Infrastructure

2.1 Continuity of the route

The basic aspect for any cycle route is the continuity of the ride. There might be route sections that are not actually built yet or have been destroyed (e.g. by floods, motorway construction etc.) Disruptions can be both physical (e.g. a missing ferry connection across a river) and legal (e.g. a section of a road or border crossing accessible only to motorised traffic).

The continuity is evaluated with respect to different user groups, which are addressed by different levels of certification. Therefore, a route that includes e.g. stairs can be considered as meeting the Continuity criterion on the Essential level (experienced and fit users are able to carry their bike up the stairs), but not on the Additional level (the route is impossible to use with hand-bikes or kids in a trailer).

Note that the Continuity criterion focuses on aspects of continuity that are not covered by other, more specific criteria. E.g. even though a “not rideable” surface (deep sand, mud, big rocks etc.) physically disrupts the route continuity, it is evaluated as part of the Surface criteria, so there is no need to include it in the Continuity criteria.

ESSENTIAL CRITERION: The route should not contain any physical disruptions that make the route impossible to travel. All natural (river, cliff etc.) or artificial (railway, motorway etc.) barriers should be crossed with adequate cycling infrastructure (bridge, ferry, subway etc.). Furthermore, there should be no legal disruptions (i.e. sections where crossing with bikes or generally entering is forbidden or subject to permissions being granted).

IMPORTANT CRITERION: If there are stairs on the route (e.g. to access a bridge), they must have a gentle incline and be equipped with ramps or channels.

ADDITIONAL CRITERION: The route shall be free of any disruptions (e.g. stairs, steps, gates or chicanes) that would make it impossible to ride for more “demanding” groups of cyclists (e.g. families with trailers, people with reduced mobility etc.). Cyclists should not be required to dismount.

2.1.1 Physical disruptions

The following physical disruptions can and should be registered during the survey in the ECS app:

- **High kerb, single step:** a significant difference in height (for example between the cycling path and carriageway on a crossing) without a comfortable ramp. This field should be used if the route inspector estimates that less experienced users, users with heavy luggage or on a non-standard bicycle might need to dismount to avoid harm or damage to the bike. If this is not the case, but the height difference is still a nuisance, it can be reflected in lowering the “**surface quality**” assessment.

- **Multiple steps – easy:**³ This refers to stairs.⁴ To qualify as “easy”, stairs should be both equipped with a comfortable wide ramp or channel AND have an incline (height to horizontal length ratio) of 25% or lower. **Multiple steps – easy** are allowed on the Essential and Important levels but not on the Additional level.
- **Multiple steps – difficult:** all other stairs that do not qualify as easy. **Multiple steps – difficult** are allowed on the Essential, but not on Important or Additional level.
- **Chicane, pole with less/more than 1.3 m clearance:** local reductions of width are taken into account in this category, e.g. short bridges, rocks, bollards, poles etc. Clearance should be measured with respect to the space needed of a tandem bicycle with a trailer, i.e. at a straight line or with gentle enough curves. Chicanes composed of two or more subsequent obstacles, each leaving 1.3 m of clearance but with no place to turn the bicycle between them, should be considered as having lower clearance. Chicanes etc. leaving less than 1.3 m of clearance are not allowed on the Additional level.
- **Obstacles:** other obstacles that do not fall in any of the aforementioned categories and might be worth registering. The details can be explained in notes.

If a section of the route is unpassable at all because of a natural or artificial barrier that makes it impossible to be crossed with a bicycle (cliff, river, motorway, railroad, fence etc.), it should be noted as “not rideable” in the “surface quality” (see section 2.3.2)



Chicanes can make the route inaccessible for cycle tourists travelling on hand bikes, tandems, with trailers etc.

³ The distinction between “Multiple steps – easy” and “Multiple steps – difficult” was introduced in version 4.3 of the EuroVelo app in July 2017 to reflect the difference between gentle steps equipped with ramps that allow the user to push the bike and more difficult ones, on which it is necessary to lift and carry the bike.

⁴ Including access to an underground passage, pedestrian bridge etc. as well as access to a ferry or other public transport link if it is necessary to continue the route.

2.1.2 Legal disruptions

Another threat to route continuity can be legal aspects. For example, crossing international borders should be possible for all cyclists using EuroVelo routes. The information about the actual situation has to be collected during the on-route assessment and/or by additional research.

Legal restrictions that can be registered in the ECS app are divided into two broad categories: “entry by bike prohibited” and “dismount”.

“Entry by bike prohibited” applies to sections that are not legally permitted to be crossed on or with a bicycle. This includes for example:

- military areas,
- motorways, expressways and other roads on which cycling is forbidden,
- railroad tracks with no legal crossing,
- border crossings only for motorised vehicles or only for local inhabitants,
- private lands with no established access rights,
- nature reserves with restricted access (for example permits are required that are not available on the spot),
- pedestrian zones, bridges, parks etc. with an obligation to dismount for more than 200 m,
- multiple obligations to dismount within one minor section,
- one-way streets with no contraflow cycling and no alternative route for the opposite direction.

“Dismount” should be marked on minor sections on which there is a legal obligation to dismount on a **stretch of up to 200 m** (for example when crossing a street or passing a short pedestrian area), but it is not generally forbidden to cross with a bicycle (as in “Entry by bike prohibited”). Longer dismount sections or multiple obligations to dismount (e.g. on every crossing) within one minor section should be classified as “Entry by bike prohibited”.

All incidents would have to be documented during the on-route assessment. While a “prohibited” section makes it impossible to certify the route at all (Essential criteria), “dismount” is not allowed on the Additional level.

2.1.3 Entry and crossing restrictions

Careful consideration should be given to sections of the route that are available only under specific conditions, e.g. part-time, subject to a fee or permit. As for now, there is no standardised way to register time restrictions and fees. There are also no strict requirements in the European Certification System, but such cases:

- should be listed in route evaluation or similar reports,
- should be clearly communicated to route users in promotion materials (on website, maps etc.);
- are recommended to provide alternative itineraries.

Cases when a section of the route is not available 24/7 during the cycling season but is or may be subject to specific temporary restrictions include for example:

- parks, industrial or other areas that can be crossed only during specific hours,
- ferries with only a few connections per day,
- ferries that might stop running in case of low/high water levels,
- forest roads that might be closed because of a high risk of fire or logging,
- areas that are periodically flooded.

Each shall be analysed and assessed individually, but for rough orientation:

- if the restriction applies to less than 5% of the cycling season or only between 22:00 and 6:00, it should not be a reason for refusing the route's certification;
- if the restriction applies to more than 30% of the cycling season or requires covering the section in an unrealistic time⁵, it should be treated as **Entry by bike prohibited** or **Not rideable** and should not be an element of a certified EuroVelo route.

Crossing a section might also be subject to a fee or permit. This includes:

- paid ferries or other public transport if it is necessary to continue the route,
- protected areas with entrance tickets,
- paid bridges.

All tickets, permits etc. should:

- be priced fairly,
- be possible to obtain on the spot,
- not require excessive waiting time.

2.2 Route components

Different kinds of infrastructure components will be combined and integrated to form a continuous EuroVelo route. The survey process is designed to monitor the share of different components on the route under assessment and to give veritable evidence of whether the chosen course is suitable for the assumed groups of users (again related to the three different levels of experience). Hence the occurrence of varying types of infrastructure components (e.g. public roads, cycle lanes, cycle paths) and relevant parameters (width, volume and speed of motorised traffic) will be monitored down to the scale of a single kilometre. In addition, safety on crossings is registered as well.

Note that the 'Route components' criteria focuses on the risk of collision with motorised vehicles. Other elements of road safety are included in Continuity, Surface and width criteria, while social safety is considered as a part of the Attractiveness criteria.

Minor sections where cyclists ride on the carriageway are assigned to one of five traffic categories: from very low to very high traffic.⁶ Minor sections where cyclists are physically separated from motor vehicle traffic (cycle paths, cycle and pedestrian paths, greenways etc.) are considered traffic-free.

Crossings are classified as safe, dangerous or very dangerous, based on the risk and potential severity of an accident.

ESSENTIAL CRITERION: The route should not contain any sections with very high traffic. No more than 50% of the length of a daily section should be classified as featuring high traffic.

IMPORTANT CRITERION: The route should not contain any sections with high traffic. No more than 50% of the length of a daily section should be classified as featuring moderate traffic. The route should not include any crossings classified as very dangerous.

⁵ E.g. cycling 30 km between two subsequent ferries in one hour.

⁶ Depending on the volumes and speed of motorised traffic, see 2.2.6.

ADDITIONAL: The route should not contain any minor segments with moderate traffic. No more than 50% of the length of a daily section should be classified as featuring low traffic. The route should not include any crossings classified as dangerous.

2.2.1 Infrastructure type

The following route component **types** can be registered in the app:

- **Public road** – cyclists have to share the space with motorised traffic. A cyclist's risks related to the surrounding traffic has to increase as the volume of motorised traffic travelling on the same road infrastructure increases. Similarly, the higher the maximum speed limit on the route, the greater the risks that can be encountered. Public roads also include bicycle logos or sharrows without continuous marking and/or exclusive space for cyclists on the surface of the road, bus lanes opened for cyclists, contraflow cycling with no dedicated cycle lane or with a cycle lane just in one direction.
- **Painted cycle lane** – space on carriageway reserved for cyclists and separated from motorised traffic by horizontal markings, e.g. continuous lines, dashed lines and/or a different colour. Motorised vehicles are not allowed to ride on cycle lanes but can be allowed to cross them, e.g. to reach a parking place or to pass another car, but only without disturbing cyclists. Asphalted shoulders can be included in this category if they are wide enough to ride a bicycle comfortably and cars cannot use them e.g. for parking. Cycle lanes can also be found on "2-1" streets and roads with one central lane for cars and space for bicycles on the sides. Cycle lanes can improve the perceived safety, but with high speeds and volumes of motorised traffic the protection they provide might be illusory.
- **Cycle path** – separate infrastructure dedicated to cyclists. Cycle paths might be running parallel to the roads but often even have their own route corridor apart from motorised traffic. Cycle path along public roads can be separated from them by construction (kerb), spare space (e.g. grass) or safety equipment (e.g. barriers). Cycle paths provide good safety between crossings, but attention must be paid to possible conflicts on crossings.
- **Cycle and pedestrian path** – separated from motorised traffic but shared by cyclists and pedestrians. This type includes also sidewalks and pedestrian zones where cycling is allowed. More width is needed to safely accommodate both kinds of users in the same space and conflicts might happen.
- **Greenway** – route exclusively dedicated to non-motorised traffic, independent from the road network (e.g. following a canal or a disused railroad). The definition of greenways and the exact range of users included (pedestrians, skaters, cyclists, equestrians etc.) may vary from country to country. Only greenways officially recognised in the relevant country should be categorised as such.
- **Cycle street** – Streets important for cyclists and with low levels of motorised traffic in some cases have their own legal status as "bicycle streets" ("fietsstraat", "Fahrradstraße"). The speed limit on bicycle streets is usually limited to 30 km/h. Cyclists are allowed to ride next to each other and motorists are forbidden to overtake bicycles.
- **Home zone** – street with no sidewalk but priority for pedestrians on the carriageway, usually with a speed limit of 20 km/h or a requirement to adapt to the speed of pedestrians. Drivers should be prepared for a range of activities, e.g. children playing in the street. Also known as: woonerf, living street or quiet lane.
- **Agricultural / forestry / water management road** – non-public road, closed to general traffic. Bicycles and maintenance or service vehicles are allowed. Might be damaged more often because of use by heavy machines. Note that this component is specifically for roads that are used for purposes listed above and not as a "catch-all" for all components located in

the countryside. For example, cycle and pedestrian paths located in forests should not be categorised as being an agricultural / forestry / water management road.

- **Bridge / tunnel for cyclists and pedestrians** – deprecated.⁷ Pick a relevant category from the ones listed above depending on what kind of traffic is allowed on the bridge.

The table on the following page presents examples of signs used to identify different types of route components. Note that the table is neither definitive nor exhaustive. E.g. there are countries that do not have a dedicated sign for cycle lanes: They use either the same sign as for cycle paths or no road signs at all (just horizontal markings).














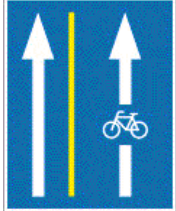




In case of doubts about how to classify a certain minor section, the following questions should be considered:

- What groups are authorised to use this component?
- What rules apply on this component?
- How is it separated from other parts of the road?

Example: a cycle and pedestrian path vs a cycle path with a sidewalk? In practice in different countries, a path signed with logos showing a bicycle and pedestrians divided by a vertical line can be considered both. In case the parts for cyclists and pedestrians are clearly separated by different construction (e.g. asphalt for cyclists, concrete blocks for pedestrians) or tactile paving, it should be evaluated as a **cycle path**. In case the separation is only by paint or colour, the path should be evaluated as a **cycle and pedestrians path**. Note that width should be measured consistently, in line with the chosen interpretation: If the route inspector assumes the component to be a cycle path, only the part for cyclists should be measured; if it is a cycle and pedestrian path, the total width of both parts should be measured.

Annex 2.1 provides examples of different route components and how they should be classified. Due to the variety and constant evolution of signage systems in different countries, it is not feasible to predict all possible cases. Route inspectors are encouraged to document new interesting cases and decisions taken during the survey. This on the one hand will ensure a consistent approach throughout the survey and on the other allow the ECF to expand the database of examples.

⁷ Will be removed in future versions of the app.

Cycle path			
Cycle and pedestrian path			
Greenway			
Cycle street			
Home zone			
Cycle lane			
Agric./ forest/ water management road			

2.2.2 Direction

Several types of route components (e.g. cycle paths, cycle and pedestrian paths) can be uni- or bi-directional. This feature can be registered in the app as “**Direction**”:

- **One way** means there are separate one-way cycle lanes or paths on both sides of the road;
- **Two way** means that the route component is bi-directional.

In case the bicycle traffic is organised differently in different directions, the worst-case scenario should be assumed. I.e.:

- If there is a cycle lane only in one direction while in the opposite direction cyclists have to share space with cars, the section should be registered as a **public road**;
- If there is a cycle lane in one direction and a unidirectional cycle path in the other, the section should be registered as a **cycle lane**.

On segregated two-way cycle (and pedestrian) paths inside built-up areas, special attention must be paid to the quality of solutions on junctions, as drivers often do not expect a cyclist coming from the “opposite” side.

2.2.3 Infrastructure width

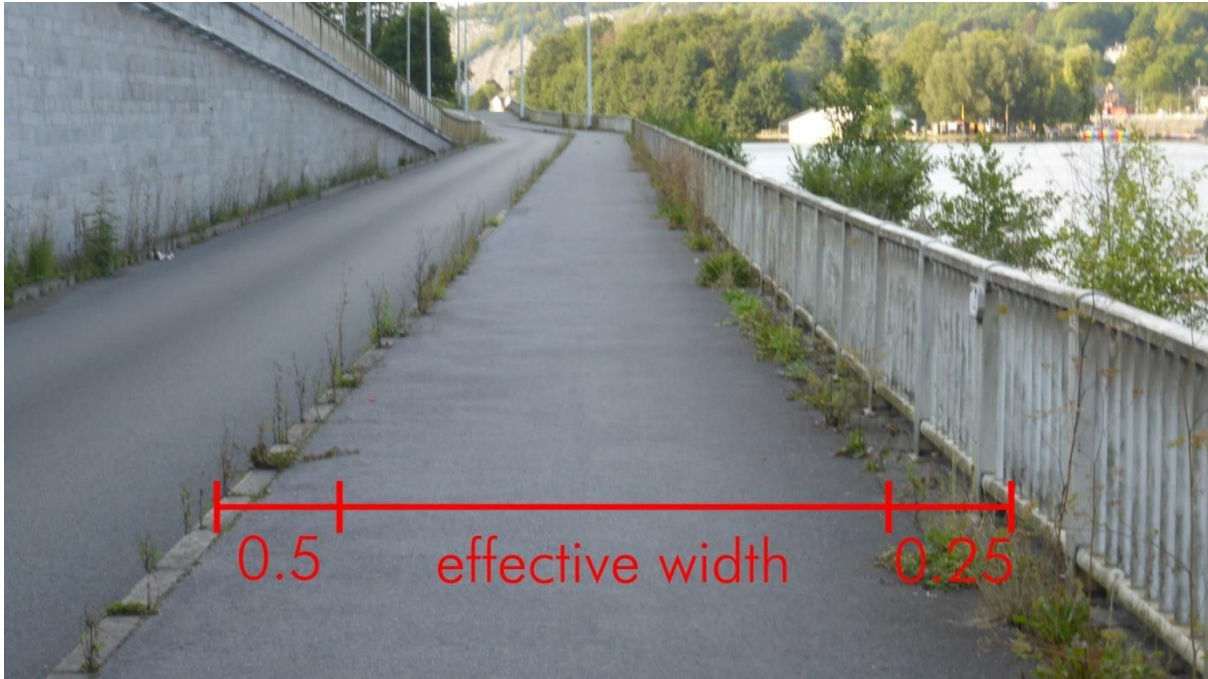
Width will be assigned by the scale of one kilometre; with the narrowest section encountered on at least 200 m of the kilometre in question determining the value for this minor section. If there are one-way cycle lanes or one-way segregated cycle paths running along both sides of a public road, the narrower cycle lane / path will be registered.

The width is divided into six categories:

More than 5.0 m (route components with motorised traffic as well as without)	category I
3.0 – 4.9 m (route components with motorised traffic as well as without)	category II
2.0 – 2.9 m (usually route components without motorised traffic)	category III
1.5 – 1.9 m (usually route components without motorised traffic)	category IV
1.0 – 1.4 m (usually route components without motorised traffic)	category V
Less than 1.0 m (usually route components without motorised traffic)	category VI

The width to note should be effective width, not surface width. On a separated cycle path (cycle and pedestrian paths, greenways etc.), it means the width that can be safely ridden on a bicycle. If a part of the surface is unusable for riding, it should not be included in the observation. Situations when the effective width is lower than the surface width include:

- A line of bollards, barrier, fence etc. on the surface or on the edge of it – treat 0.25 m from the barrier location as not rideable;
- Segregated cycling paths directly next to the carriageway (no buffer zone in between) – treat 0.5 m from the carriageway edge as not rideable (buffer zone needed from passing cars);
- Damaged or overgrown edge of surface.



Example: effective width of a cycle path reduced by buffer zone from carriageway (left) and railings (right).



Example: effective width of a cycle lane reduced because of lack of safe distance from parked cars.

The width of painted cycle lanes is evaluated with the following assumptions:

- The cycle lane is next to a car lane;
- The cycle lane maintains a safe distance (min. 0.5 m) from parked cars and roadside obstacles.

If the assumptions are not true, the effective width should be calculated as follow:

- If there is a safety buffer between the cycle lane and the car lane, its width (up to 1.0 m) can be added to the cycle lane width
- If the distance of the cycle lane from parked cars and roadside obstacle is less than 0.5 m, the effective width should be reduced by the missing distance.

Short sections with reduced width – for example bridges – or local bottlenecks (chicanes, poles, other obstacles) should be noted as a physical disruption under the Continuity criterion.

2.2.4 Volume of motorised traffic

The volume of motorised traffic along the route should be registered. All lanes and both directions should be included. For evaluation purposes the traffic volume has been divided into six categories, from car-free to more than 10 000 units/day.

Units / day	category	
Car-free	I	best
1 – 500	II	
501 – 2000	III	
2001 – 4000	IV	
4001 – 10 000	V	
more than 10 000	VI	worst

The volume of motorised traffic is evaluated in units⁸ that reflect the higher impact of bigger vehicles on cyclists' real and perceived safety.

- Each personal car or motorcycle should be treated as 1 unit
- Each passenger or delivery van should be treated as 2 units
- Each truck or bus should be treated as 4 units

To estimate the traffic volume the route inspectors shall count the passing vehicles during a certain period (at least 10 minutes) **whenever a change of route components occurs**. The following table gives hints for a useful approach.

⁸ This is a slightly modified version of passenger car units (passenger car equivalent) used by traffic engineers to assess the traffic-flow rate. The modification was introduced to better reflect how different vehicles affect the real and perceived safety of cyclists.

Units / day	Units / h	Units / 10 min.
Car-free	none	none
500	36	6
2 000	144	24
4 000	288	48
10 000	720	120

By counting the vehicles for 10 minutes during the field assessment, the traffic load can be categorised according to the categories I to VI.

The evaluation should take place during the cycling season. If the daily traffic varies during the season (for example between working days and weekends), the higher estimates should be assumed (but excluding special holidays, festivals etc.) The assessors' estimates should be communicated to the responsible administration. In case of doubt about the general situation, the findings of the inspection can be matched with traffic counting data from official sources.⁹

A road is considered 'car free' when motorised traffic is forbidden at all times, with the possible exception of occasional access by maintenance vehicles (but not on an everyday basis).

While not taken into account in the certification criteria, levels of traffic on roads adjacent to segregated cycle infrastructure (cycle paths, cycle and pedestrian paths) should also be monitored by the route inspector, as should any negative effects on the user's environment such as noise, smell or dust (cf. Attractiveness). For example, if a cycle path is located next to a highway, road or street with heavy traffic, the traffic on the adjacent road must be registered.

2.2.5 Speed limit

The ECS takes into account four different categories of speed limits. The best category represents sections in traffic calmed areas, where the maximum speed does not exceed 30 km/h. On the other hand, speeds above 80 km/h do not allow the cyclist to ride in a relaxed way. These sections are not well adapted to the needs of comfortable and safe riding and will not allow a route component to be classified in the best possible category even if it features very low traffic volumes.

30 km/h or less	category I	best
31 km/h to 50 km/h	category II	
51 km/h to 79 km/h	category III	
80 km/h or higher	category IV	worst

Speed limit should be registered applying the same considerations as with traffic volume, e.g. if there is cycle path next to a carriageway, both volume and speed of traffic should be taken from the

⁹ In case detailed data about the split between different types of motorised vehicles is not available, passenger car units can be used as an estimate.

carriageway, not the cycling path. In case different speed limits apply in different directions, the higher one should be noted.

Route component	What traffic volume and speed should be registered in the app?
Public road	<p>Note the volume of traffic (all lanes and both directions) and speed limit on the carriageway cyclists are using.</p> <p>If there is a physically separated carriageway for through traffic and cyclists are sharing another carriageway, dedicated for local traffic, only the traffic and speed limit on the local carriageway should be counted.</p>
Painted cycle lane	
Cycle street / Home zone	
Agricultural / forestry / water management road	
Cycle path	<p>Note the traffic and speed limit on the carriageway next to the cycle infrastructure (if any). There should be no motorised traffic at all on the cycle infrastructure itself. If there is traffic, probably another route component type should have been chosen.</p>
Cycle and pedestrian path	
Greenway	<p>There should be no motorised traffic at all, neither on the greenway itself, nor on the adjacent road (there should be no adjacent road). If there is traffic, probably another route component type should have been chosen.</p>

2.2.6 Traffic category

Infrastructure type, traffic volume and traffic speed are combined to determine the traffic category of a given minor section. In case of painted cycle lanes, their width is also taken into account. The calculation of the traffic category is done automatically based on the data collected in the app. It is explained here only for informative purposes.

When **cycling in mixed traffic** (on a public road, bicycle street, agricultural/forest/water management road), the following table is used to determine the traffic category:

Cycling in mixed traffic	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
1-500 units/day	very low	very low	very low	low
501-2.000 units/day	very low	low	low	moderate
2.001-4.000 units/day	low	moderate	moderate	high
4.001-10.000 units/day	moderate	high	high	very high
>10.000 units/day	moderate	very high	very high	very high

For **cycle lanes painted on the carriageway or asphalted shoulders**, the following table is used:

Cycling on cycle lanes	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
Minimum width / direction	1.5 m	1.5 m	2.0 m	2.0 m
1-500 units/day	very low	very low	very low	low
501-2.000 units/day	very low	very low	low	low
2.001-4.000 units/day	very low	very low	low	moderate
4.001-10.000 units/day	very low	low	moderate	high
>10.000 units/day	low	moderate	high	very high

If the cycle lane width is lower than the specified minimum, the lane does not guarantee a safe distance from overtaking cars and therefore the table for mixed traffic is used instead.

Maximum share of length of different traffic categories on a daily section to fulfil Essential, Important and Additional criteria:

	traffic-free, cycle paths etc.	Traffic				
		very low	low	moderate	high	very high
Essential	no limit	no limit	no limit	no limit	max 50% on a daily section	not allowed
Important	no limit	no limit	no limit	max 50% on a daily section	not allowed	not allowed
Additional	no limit	no limit	max 50% on a daily section	not allowed	not allowed	not allowed

2.2.7 Dangerous crossings

Dangerous or very dangerous crossings with public roads should be registered in the app. The assessment of the level of danger should take into account the risk of accidents (depending on visibility, signing quality etc.) and the potential severity of consequences (depending on speed and type of traffic). Only crossings where both the risk and potential severity of an accident are serious should be registered as very dangerous.

	Limited severity: low speed of traffic (less than 50 km/h in the crossing area)	High severity: high speed OR significant traffic of heavy vehicles
No risk	safe	safe
Low risk	safe	dangerous
High risk	dangerous	very dangerous

The following lists are not exhaustive but might help to assess the level of risk on crossings.

Low risk:

- Raised crossings, speed cushions for cars
- Single lane roundabouts
- (Most) traffic lights
- Single lane in each direction with wide traffic island in between
- Very low traffic volumes

High risk factors:

- Limited visibility (by fences, walls, shrubbery, billboards, vertical or horizontal curves...)
- Left (in right-hand traffic) turns on roads with no hook turn possible
- Heavy-goods vehicles turning right (in right-hand traffic) across cycle lane/path
- Overtaking possible on crossing (2x2 and wider roads between junctions)

- Roundabouts with multiple lanes on exits
- Traffic lights with significant conflicts
- Long crossings (> 10 m) with no traffic island or lights
- Lack or low quality of necessary signing for drivers

Unless dealing with major roads, the assessment takes into account clear warnings signals to cyclists and other road users. A well signed intersection can thus be downgraded from 'very dangerous' to 'dangerous' or even considered safe, depending on the traffic level.



Dangerous junction (bike path – cross road) in Germany. Photo credit: Velo.hu

Annex 2.2 provides examples of safe and dangerous crossings.

2.3 Surface

Road surfaces of EuroVelo routes under assessment have to be built according to the relevant (national / regional) technical standards and prescriptions. Taking into account that EuroVelo routes should play a major role within national cycle networks, certified EuroVelo routes should provide consolidated, high quality surfaces.

For each minor section, two parameters – surface material and quality – should be noted in the app. **Both surface data (material and quality) should be taken from the same point.**

If there is a change of road surface within a kilometre, the lowest quality stretch of 200 m or more will determine the values for this minor section. If there is a stretch that is completely not rideable and where it is difficult to even walk the bike (deep sand, deep mud, large rocks), the whole section should be qualified as not rideable, even if the stretch is shorter than 200 m.

ESSENTIAL CRITERION: The surface should be suitable for use by cyclists with any type of trekking or touring bike in normal weather conditions during the local cycling season. It should be smooth and solid enough to ride, so it should either be asphalted or paved with another resistant material. In exceptional circumstances loose material may be used but must be consolidated.

IMPORTANT CRITERION: At least 50% of any daily section of the route should be as rideable as good asphalted surface.

ADDITIONAL CRITERION: The surface should be as rideable as high-quality asphalt. The width should allow smooth traffic of multitrack bicycles (bikes with two-wheeled trailers, handbikes etc.) in both directions.



Good quality asphalt surface, but not wide enough for comfortable bidirectional traffic. EuroVelo 10.

2.3.1 Surface material

The surface materials are divided into four basic categories:

- Asphalt / concrete
- Blocks / slabs / cobbles
- Stabilised gravel
- Gravel / dirt

Note the distinction between concrete pavements and pavement made from concrete blocks. The difference is that concrete pavements (“asphalt-like”) are nearly monolithic, while block/slab pavements (second category) are made of many smaller elements. Concrete pavements also need joints, but they are typically spaced at distances of 4 to 5 m.

The ECS contains no specific requirements regarding surface materials. However, the surface material might affect the highest surface quality that can be assigned to a section. For example, “perfectly rideable” cannot be assigned to non-asphalted or similar surfaces.

2.3.2 Surface quality

The surface might be damaged because of age, heavy traffic, lack of repairs, natural disasters or design faults. The damages can negatively affect the user experience and range of users able to ride

the route.

The surface quality (condition) should be assigned to one of the five categories, from “perfectly rideable” to “not rideable”, based on the kind of bike that is necessary to ride the route without risk of damage to the bicycle or injury to the rider. To get at least the basic (“badly rideable”) definition the section should be rideable at least with a simple (non-suspension) mountain bike for an average skilled and experienced rider staying seated during the whole section without any risk of injury or damage.

The rideability should be assessed during the survey by riding a bike. The inspector shall also consider how difficult the surface would be to ride in different weather conditions (if applicable in the cycling season). For example, a mud road might be moderately rideable after several dry days but might become completely not rideable after several hours of rain. Some sand roads can be acceptable during the rainy season, but not rideable in summer.

Surface quality	Rideable with
perfectly rideable	road, folding or children’s bike in every weather condition
well rideable	trekking bike in every weather condition
moderately rideable	rugged touring bike in most weather conditions
badly rideable	mountain bike and comparable
not rideable	-

If the surface is not rideable at all, record the distance in the notes section of the assessment tool.

Examples of different surface materials, quality and how they should be categorised are shown in Annex 3.

The following guidelines can be used to characterise the quality to different surface materials:

Surface quality	Asphalt / concrete	Blocks / slabs / cobbles	Stabilised gravel	Gravel/dirt
perfectly rideable	smooth, low rolling resistance	X	X	X
well rideable	raw granulation, slightly bumpy	even	smooth, well maintained, fine gravel	X
moderately rideable	patched, uneven, single potholes	uneven, major seams	uneven, insufficiently compacted, waterlogged	smooth forest or field road, neither sandy nor muddy
badly rideable	damaged asphalt, multiple patches or potholes, large cracks	raw cobblestones, missing blocks, broken slabs, longitudinal rifts	deep gravel, žvyras/szuter, loose stones, potholes and puddles	somewhat sandy, puddles, roots, loose stones
not rideable	deep sand, deep mud, large rocks, deep holes			

2.4 Different route components, traffic, surfaces or widths in a minor section

The route component is characterised by several interconnected parameters, such as type, width, traffic volume and speed, surface material and quality. It might happen that within one minor section the parameters change or even the type of the component varies. The ECS does not have the capacity or aspiration to evaluate all those changes on a scale below 1 km. Therefore, the rule to assess “the worst 200 m” within a minor section (1 km) was adopted.

Note that the data for the type of infrastructure, width, traffic volume and traffic speed for one minor section should refer to the same infrastructure component. These parameters are evaluated in connection with each other, therefore **they must not represent different locations within the same 1 km section**. For example, if you choose the infrastructure type “public roads” (“worst” type in this minor section), you should not enter the width of the cycle path within the same minor section into the app, even though the cycle path is probably narrower than the public road (“worst width”).

Therefore, in case of a minor section which includes within one kilometre a few different infrastructural components or for example public roads with varying amounts and speeds of traffic, pick the one (at least 200 m long) that is the most problematic or challenging for users and take all four data from that point. When choosing the most problematic part, we recommended the following hierarchy/priority of problems:


1. Public roads and cycle lanes with very high traffic
2. Public roads and cycle lanes with high traffic
3. Public roads and cycle lanes with moderate traffic

4. Unidirectional components with a width of less than 1 m or bidirectional components with a width of less than 2 m
5. Public roads and cycle lanes with low traffic category

If none of the above problems exists within the limits of the minor section, then:

- in case of different public roads or public roads and other infrastructure types – pick 200 m of public road with the highest volume of traffic,
- in case of segregated infrastructure of varying width – pick the narrowest 200 m,
- in case of different infrastructure types with similar width – pick one which has to accommodate widest range of users (public road > greenway > cycle and pedestrian path > two-way cycle path > one way-cycle path).

Example 1:




300 m	400 m	300 m
public road	public road	cycle path
5000 vehicles/day	300 vehicles/day	15000 vehicles/day
70 km/h	50 km/h	90 km/h
(high traffic)	(very low traffic)	-
7 m	4.5 m	2 m

What to put in the app:

- **YES:** public road, 4001-10000 vehicles/day, 51-79 km/h, more than 5 m – because public road with high volumes and speed of traffic is the highest on the list of problems, so we take all four measurements from this road.
- **NO:** public road, above 10000 vehicles/day, 80+ km/h, 2-3 m – because the parameters come from different locations within the same section and do not form a consistent set of data for assessment.

Example 2:




300 m	400 m	300 m
public road	public road	cycle path, two way
3500 vehicles/day	300 vehicles/day	15000 vehicles/day
30 km/h	30 km/h	90 km/h
(low traffic)	(very low traffic)	-
7 m	4.5 m	1.2 m

What to put in the app:

- cycle path, more than 10000 vehicles/day, 80+ km/h, 1-2 m.

Note: when picking the most problematic 200 m in terms of type of infrastructure, width, traffic volume and traffic speed, **do not consider surface**, as it is evaluated separately, not in connection with the traffic parameters. Therefore, if within 1 km there are 300 m of public road with high volumes and speed of traffic and 300 m of badly rideable gravel forest road, you can report both problems in your assessment.

Example 3:



300 m	400 m	300 m
public road	public road	forest road
5000 vehicles/day	300 vehicles/day	traffic-free
70 km/h	50 km/h	-
(high traffic)	(very low traffic)	-
7 m	4.5 m	3 m
Asphalt	asphalt	dirt
well rideable	perfectly rideable	moderately rideable

What to put in the app:

- public road, 4001-10000 vehicles/day, 51-70 km/h, more than 5 m – because this is the most problematic part in terms of traffic volume and speed

AND:

- dirt, moderately rideable – because this is the most problematic part in term of surface, longer than 200 m, and surface quality is evaluated independently, not in connection with traffic volume/speed

If there are important aspects that would not be reflected in a data point like that (for example a minor section partially on high speed road with high traffic, and partially on a very narrow cycle path), you can describe them in the notes for that section.

2.5 Gradients

It is much harder to ascend vertically or to go uphill than to cycle on flat sections.

Gradients are as of now not recorded using the ECS app. Vertical coordinates should be documented separately with the help of a GPS unit during the on-route assessment. The GPS receiver should ensure high vertical accuracy, as small random errors in altitude can add up to a significant amount over a daily section and affect the evaluation.

The output will be an elevation profile for each daily section. The following parameters are then extracted from the elevation profile to evaluate the route suitability for different user groups:

- Cumulative elevation gain and loss per daily section: sum of every gain (loss) in elevation throughout the section.
- Highest cumulative elevation change (gain + loss) per one kilometre of the route.

Additionally, the inspector should take note of any slopes on the route that could be too steep to ride for the demanding cycle tourists (more than 6% incline). Short slopes might not be prominent in the elevation profile, as the elevation difference might be difficult to distinguish from a GPS receiver error but can still be an obstacle for a tourist riding on a hand bike or with a child trailer.

ESSENTIAL CRITERION: The cumulative elevation gain or loss on a daily section does not exceed 1000 m.

IMPORTANT CRITERION: The cumulative elevation gain or loss on a daily section does not exceed 500 m.

ADDITIONAL CRITERION: The cumulative elevation change (gain plus loss) on any minor section (1 km) of the route does not exceed 60 m. No slopes are too steep to ride for the target groups.



Steep slopes can be a challenge for cyclists travelling with luggage.

2.6 Attractiveness

EuroVelo routes should offer a pleasant and interesting cycling experience. They should lead through attractive landscape, connect important cultural and natural attractions, provide satisfactory social safety and not be exposed to nuisances such as excessive noise.

ESSENTIAL CRITERION: There is at least 1 significant cultural or natural attraction on a daily section. This criterion can also be fulfilled by highly attractive landscape.

IMPORTANT CRITERION: No more than 25% of a daily section should expose cyclists to noise, dust, odour or other environmental pollution. There is at least 1 attraction related to the main theme or subtheme of the route on a daily section.

ADDITIONAL CRITERION: No more than 50% of a daily section should lead through a monotonous surrounding. The route should be free of social safety challenges, e.g. fear of crime in urban areas or dangerous situations caused by animals.

An assessment of attractiveness can be somewhat subjective, any decision should be considered carefully. Nevertheless, it is an important aspect for long-distance cycling and should be included in route evaluation. The following elements shall be registered during the route survey in the app:

- Area / landscape
- Attractions
- Nuisances



Highly attractive landscape on EuroVelo 8 in Cataluña. Photo credit: Pere Duran.

2.6.1 Area, landscape

Landscape visible from the route can be classified as monotonous / unattractive, attractive and highly attractive. The following table can be used as a rough guideline:

Area / landscape	Examples, comments
Monotonous / unattractive	warehouses, shopping malls, never-ending suburbs, monocultural agriculture (e.g. 7 km of corn field)
Attractive (baseline)	forest, meadows, fields with some variety (trees, hills, different crops), roads lined with trees
Highly attractive	sea view, panoramic view, cliffs, canyons, unique nature, historical city centre, unusual bridge

The issue of monotony or unattractiveness of the landscape can be alleviated to some extent by installing pieces of landscape art, planting trees etc.

2.6.2 Attractions

Attractions can be cultural or natural. They should be more localised than just attractive landscapes and have a unique identity. Examples of attractions include:

- historical castle or church,
- museum,
- natural monument or reserve,
- visitors centre (e.g. for a national park) with exhibition,
- view tower.

The name and/or nature of the attraction should be recorded in the notes section in the app. The route evaluation report shall address the relevance of the attraction in the context of the route theme and its significance (e.g. UNESCO site).

2.6.3 Nuisances

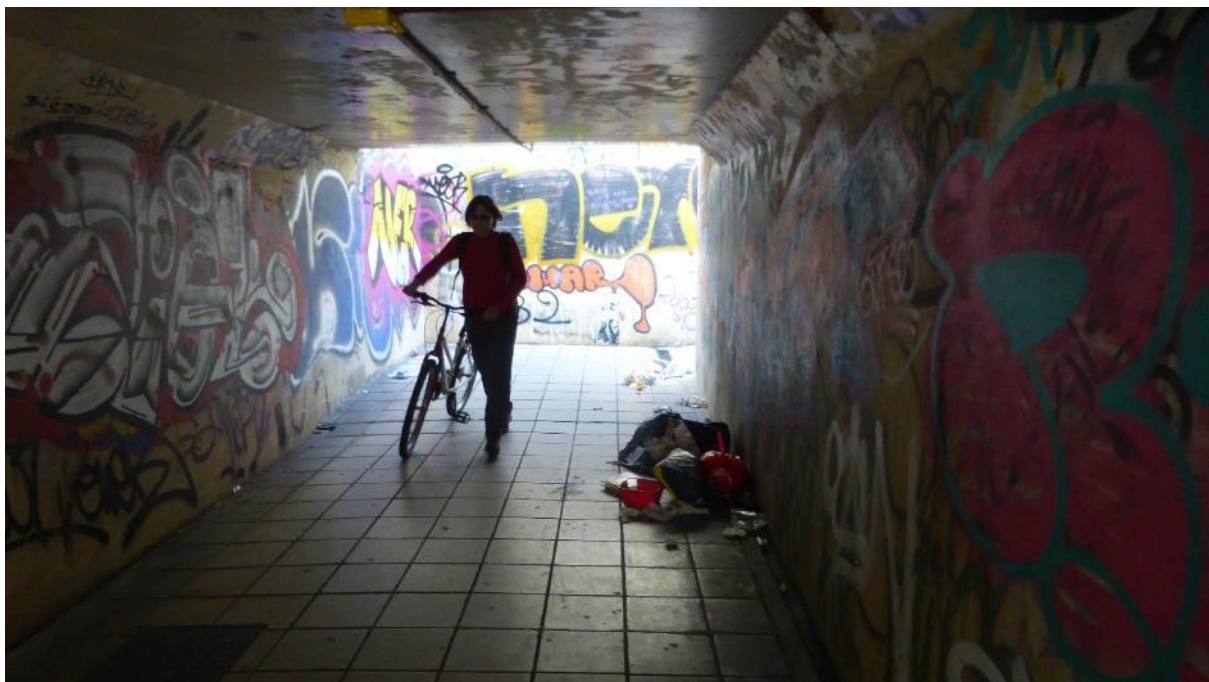
Two kinds of nuisances can be recorded in the app, representing environmental and social safety challenges.

Environmental annoyances, such as noise, dust or smell can seriously reduce the recreational value of a cycle route. Just think about riding along motorways, garbage dump sites, cement plants etc.

Cyclists not only face dangers from traffic situations on their trips but may sometimes also get into situations that seem to be insecure because of individual safety problems. This might be the case in areas affected by crime or in open landscapes exposed to free-living animals like shepherd dogs, to minefields or to shooting ranges.

Examples of both kinds are given in the table below.

App field	Can be used to register
Crime infected / wild dogs	accumulated trash, excessive unaesthetic graffiti, dark underground passage, dark corners, e.g. under a flyover, minefield, horde of wild dogs, shepherd dogs etc.
Noise, dust and smell	busy motorway with no noise barrier, industrial activity generating smoke or dust, factory farm, waste landfill



Social safety is an important part of route attractiveness.

2.7 Signing

EuroVelo routes should be signed in line with national standards (if they exist) and EuroVelo guidelines (obligatory). No signs should be missing at major crossings or turning points. Ideally, there should be regular confirmation and distance signs.

ESSENTIAL CRITERION: The route should be signed in line with the relevant national standards (if they exist) and the EuroVelo guidelines (always).

IMPORTANT CRITERION: No signing is missing at main junctions. Signing makes it possible to follow the route by night with standard bicycle lighting (e.g. signs are retroreflective).

ADDITIONAL CRITERION: Confirmation signs or horizontal markings are available after every junction and on long sections without junctions (at least every 5 km). Signs include the name of and distance to the next main town or destination at least every 15 km.

All signing elements related to cyclists have to be evaluated – with a focus on the specific EuroVelo route under assessment since there might be other topical cycling routes making use of the same infrastructure. The assessment will be done according to the prescriptions of the relevant national (as an exception at least regional) signing standards for cyclists and will especially focus on the availability of EuroVelo signing elements. If there are no national standards established, the evaluation will focus on the adequacy of the signing system in general. The assessment is performed on the route.

The following aspects of signing should be registered in the app:

- General conformity with national signing standards; Level of integration of EuroVelo logo;
- Different types of information that the cycle tourist receives through signs;
- Defects of and irregularities in the signing system.

2.7.1 Conformity with signing standards

Before starting the field work, the route inspectors should familiarise themselves with the national signing standards or guidelines applicable to the surveyed route. During the survey, conformity with the national standards shall be evaluated on every minor section:

- Fully conforms – if everything is signed according to the applicable national regulations
- Partially conforms – if some aspects do not follow the regulations (e.g. wrong colour, size or location of a sign), but the signs are still possible to follow.
- Does not conform – if there are no signs or the signs clearly differ from the standards.

Note that e.g. a lack of any signs on a minor section can be interpreted differently depending on what is required or recommended in the national standards. Some national standards require signing only on turns and major crossings, some on every crossing and some require additional confirmation signs at set intervals if there are no crossings. In case the national standard does not require a confirmation sign every kilometre, the signing can still be considered as fully complying with the national standard if there are no signs but also if there is no need for signs (straight road or a cycle path with no possibility to turn, clearly signed on the last crossing before).

2.7.2 EuroVelo logo integration

All versions of EuroVelo logo integration described in “Signing of EuroVelo cycle routes” are considered here:

- First priority
- Second priority

- Third priority
- Frame version

In most cases, the same version of EuroVelo logo integration is applied consistently over longer signed stretches. The version applied should be mentioned in the route evaluation report, but it is not necessary to note it on every sign.

The EuroVelo logo may be integrated:

- On signs
- On information boards

In case there are no signs, “No logo” should be registered in the app.



Example of first priority EuroVelo logo integration on a confirmation sign. Photo credit ???

2.7.3 Sign content

The following elements are registered in the app and can contribute to route evaluation:

- **Direction confirmation** – small signs with a distinctive route number, name or logo telling the cyclists that they stay on the right track. Can also be painted on the surface. Confirmation signs include also direction change signs on crossings but do not include generic signs that do not clearly identify the route (e.g. just a logo of a bicycle). To meet the Additional criterion, confirmation signs should not be set more than 5 km apart.
- **Next main town name** – sign with a name of an important destination **along** the surveyed route. These signs should clearly identify the direction in which to travel to reach the named destination. Often destination signs also include distance, in which case both content types should be marked in the app. To meet the Additional criterion, signs naming the route destination should not be set more than 15 km apart.
- **Distance** – number of kilometres or miles **along** the surveyed route, usually measured in relation to a specific destination (e.g. next main town), but in some rare cases the distances from the beginning of the cycle route (or section of the route) are shown, e.g. every kilometre without any specific location name. To meet the Additional criterion, distance signs should not be set more than 15 km apart.

- **Attractions/village names** – signs referring to destinations that are close to the surveyed route, but not necessarily exactly on it. Include neighbouring villages, natural/cultural attractions, other cycle routes, but not specific services, evaluated separately (e.g. public transport hubs, accommodation or bike shops).

2.7.4 Signing defects

The app also offers a possibility to note local signing defects. Note that defects are evaluated independently from conformity with national regulations. The route inspector shall note both:

- Defects that violate national regulations (e.g. a missing sign on a crossing)
- Deficiencies that do not violate regulations but can still be confusing for the user (e.g. a sign to turn right with two roads on the right)

In the app the defects are classified in the following categories:

- **Missing sign** – lack of sign on a crossing where it would be necessary; can be both a deficiency of original signing or a result of vandalism;
- **Wrong name** – misleading information on the sign;
- **Signing not/poorly readable** – sign damaged or worn-out, but also e.g. placed too far away considering the font size.

2.8 Public Transport

The app can be used to take note of train stations, bus stops and ferry terminals. Only connections that offer a possibility to carry a bike should be recorded. The inspector should also note the accessibility of the station or terminal (following the criteria described in Continuity).

While an initial impression of public transport connections should be given by the route inspector on the road, this should later be backed up by internet research, especially to check the possibility of bike carriage in certain connections.

Note that in rural areas the availability of taxi services that cater for cyclists can also be considered as public transport.

ESSENTIAL CRITERION: Carrying bikes on public transport to access the route is legally and physically possible at least every 150 km. There should be at least 2 reliable services a day during the local cycle tourism season each carrying a minimum of 2 assembled touring or trekking bikes.

IMPORTANT CRITERION: Carrying bikes on public transport to access the route is legally and physically possible at least every 75 km. There should be at least 6 reliable services a day during the local cycle tourism season each carrying a minimum of 4 assembled touring or trekking bikes.

ADDITIONAL CRITERION: Carrying special bikes (trailers, tandems, hand bikes) on public transport to access the route is legally and physically possible at least every 75 km. There should be at least 6 reliable services a day during the local cycle tourism season each carrying a minimum of 4 assembled bikes. It is possible to reserve a space for bike in advance.

The accessibility of public transport stops and stations, considered for the above

criteria, should meet the continuity criteria on respective level (e.g. if a train station is considered for the additional criterion, platforms should be accessible by ramps or lifts, not only stairs).



Intercity bus equipped with bicycle racks, Lithuania.

2.8.1 Public transport reliability

Public transport services are considered reliable if:

- Trains, buses or ferries leave according to a published schedule and in most cases (e.g. 95%) on time;
- The possibility to carry the bike is not dependent on the willingness of the bus driver, train conductor or ferry captain.

Examples of public transport that cannot be considered reliable:

- A train connection that theoretically transport bikes, but because of technical problems is often substituted by bus services with no possibility to take a bike;
- A ferry connection that is often cancelled because of low or high levels of water;
- Busses that officially do not carry bikes, even if it is generally accepted to take them (e.g. with a small bribe);
- Bus companies that allow a possibility to carry a bike at the drivers' discretion (e.g. depending on amount of luggage taken by other passengers).

2.8.2 Number and capacity of connections

What services can be included in the evaluation depends on the context. Generally, they should allow the tourist to access the route from big cities in other countries, but that does not mean that

only direct international connections can be counted. Connections to major hubs with a wider range of transport options (e.g. a capital of the region) are also acceptable. Examples:

- A train connects A and B, both with regular international connections. On the way it calls at C, two times on the way from A to B and two times on the way from B to A. This can be counted as 4 connections for C.
- A train connects A and D, where D is a dead-end end of the line town in the mountains, with no other connections. On the way it calls at E, two times on the way from A to D and two times on the way from D to A. This should be counted as 2 connections for E.

The ECS defines the minimum capacity for the connections on different levels. However, as a European-wide standard, covering also very remote areas, the threshold is set quite low. Therefore, the capacity should also be evaluated against actual demand. Problems with insufficient capacity should be monitored and addressed.



Demand significantly exceeding the available public transport capacity should be addressed.

3 Services

EuroVelo routes are not just a combination of infrastructure components. Their success as cycling routes will highly depend on high-quality tourist services. These service elements dedicated to cyclists will be assessed in a two-step process. Services related to cyclists on the route will be assessed per kilometre via assessment sheet. Some of the services will be monitored separately through additional research.



Certified cyclist friendly accommodation in the sphere of influence of the route.

3.1 Accommodation

The accessibility of accommodation and the range of needs it covers will be a main aim of this part of the evaluation. Accommodation facilities located in the sphere of influence of the route – including the visible / signed establishments located up to 500 m away from the route – will be recorded during the on-route assessment. In case you cannot find all categories in every day section along the route during the assessment ride, please proceed with the second step.

In a second step, (online) research shall locate accommodation facilities within a corridor of 5 km on each side of the route (or up to 30 min of cycling away from the route in mountain regions). The research should comprise all these data sources that are relevant and accessible to a cycle tourist (websites, roadbooks, accommodation directories and so on). The accommodation facilities within this corridor can be included if there is a possibility to reach them safely on a bike, since users may be disposed to ride a bit more to find a suitable accommodation (i.e. a more comfortable category, cheaper price, campground, youth hostel etc.)

To meet the varying expectations, it is necessary to bear in mind that cycle tourists choose their accommodation from a broad range of facilities in different categories. Nevertheless, it is crucial that the distance between two accommodations is not too far since the average day trip cannot be extended indefinitely because of the physical limitations of cyclists. Therefore, the assessment is based on the following categories (stars for accommodation based on the HOTREC [European trade

association of Hotels, Restaurants and Cafes in Europe] classification):

Luxury (*****) hotels or high-quality (****) hotels	category I
Medium and standard (***) hotels, high-quality pensions, local hotels, quality hostels	category II
Budget: simple hostels, private room, simple bed & breakfast, youth hostel	category III
Camping (incl. public campgrounds)	category IV

Apart from the accommodation category, route inspectors should register whether the accommodation is certified as cyclist-friendly. Relevant national or regional certification schemes and labels include e.g. "accueil velo", "bett+bike", "fietsers welkom", "swiss mobility".

ESSENTIAL CRITERION: The daily section should have at least basic or average standard accommodation (simple hotel, home stay, camping etc.)

IMPORTANT CRITERION: The range of standards on a daily section is not limited to very basic only.

ADDITIONAL CRITERION: At least some accommodation is certified as cyclist-friendly.

3.2 Food, drink and rest area

Gastronomy facilities located in the sphere of influence of the route will be registered during on-route assessment. Gastronomy and food supply offers will be assigned to different categories as follows:

Category	Provides	
Gourmet restaurant	High quality, specialty food	category I
Standard restaurant/bar	Warm meal, prepared in the place	category II
Pub/café/food shop	Hot drinks, fast food and/or sandwiches; also vending machines	category III
Rest areas	Place with a roof (protection from wind/rain) to comfortably consume own supplies, toilet	category IV

Additionally, cyclist-friendly gastronomy according to national or regional classification standards shall be registered in the app as well.

ESSENTIAL CRITERION: Food (e.g. shop, café, restaurant, vending machine) and drinking water on every daily section.

ADDITIONAL CRITERION: Food or rest areas available every 15 km. Drinking water available every 15 km.

3.3 Bike services

Holiday cyclists might need to rely on a service-network in case of a bicycle malfunction. Only a minor share of all leisure cyclists might be able to have their bikes repaired on their own, and even they may need spare parts, as it is not feasible to carry supplies and tools for every possible emergency. Most users will need facilities where bikes can be repaired by skilled personnel. An alternative solution might be a bike helpline, i.e. a published phone number that a user can call to ask for assistance. Additionally, the growing popularity of e-bikes creates demand for charging stations.

The following facilities will be registered during on route assessment.

- **Bike repair shop** – bike shop or workshop with spare parts and skilled personnel available to repair bikes on the spot;
- **Shop with spare parts** – a shop with bike parts, but not offering assistance with repairing; also workshops which require to leave the bike for an extended period for a simple repair.
- **Vending machine** – a machine with common spare parts (e.g. tubes, bike lights)
- **Self-service station** – bike stand/hanger with tools (keys, Allen keys, screwdrivers) and bike pump.
- **Helpline** – assistance service available upon calling the designated phone number; the service needs to be signalled on the route (on information boards, signs, rest areas etc.) and the location of such signalisation should be registered in the app.
- **Bike rental** – possibility to rent a bike or pedelec.
- **E-bike charging** – public facility to charge e-bikes or pedelecs.

ESSENTIAL CRITERION: Bike repair workshop, bike shop, vending machine with spare parts or self-service station on every daily section.

IMPORTANT CRITERION: Bike repair workshop or helpline on every daily section.

ADDITIONAL CRITERION: Bike repair workshop and pedelec charging stations on every daily section.

3.4 Bookable offers

Availability of bookable offers covering the given stretch of the route proves that it is a usable and attractive product. The assessment of bookable offers is not done during the field work but has to be performed via on- and offline data research.

IMPORTANT CRITERION: Daily section is included in at least one cycling holiday offer.

4 Marketing, promotion

The marketing of EuroVelo routes can be evaluated on different scales. On the one hand it is necessary to monitor the activities to promote the route as a transnational route with the topic of and the reference to EuroVelo. On the other hand, there might be national or regional marketing activities that focus on other topics but also promote the EuroVelo activities once the (potential) customer gets attracted to the route.

While on the road, the route inspector should pick up or document any marketing materials that they come across during the course of their trip. This research can then be backed up by more in-depth Internet research of available promotional materials.

The following list of criteria has to be the benchmark and reference for all kinds of marketing tools included in the evaluation:

- Level of reference to the specific EuroVelo route under assessment
- Level of synchronisation with the official route proposal
- Provision of practical information concerning the route
- Provision of information about sights, points of interest and cultural highlights
- Provision of information about services (accommodation, bike services etc.)
- Provision of information about public-transport connections
- Availability of multiple language versions
- Distribution channels

4.1 Web Communication

Websites are nowadays the most important publications for the preparation of a cycling trip. Therefore, the information has to be easily accessible, accurate, and up to date. The website should comply with the defined requirements (multiple languages, categories of information to be provided). The assessment of websites has to be performed via online data research.

ESSENTIAL CRITERION: It is obligatory to provide detailed information about the national and/or regional sections on the national and/or regional level, connected with overview info about the whole route on EuroVelo.com. The content of any national / regional website should be at least information on: the route (including a detailed map), signing, accommodation and public transport connections.

IMPORTANT CRITERION: The national / regional websites should include interactive maps, points of interests, accommodation databases, integration of public transport timetables and downloads of GPS-tracks.

The ECS does not contain any specific requirements with regard to other electronic communication tools, such as social media, online marketing campaigns or smartphone applications. However, their importance is not to be underestimated and the information about them should be included in the route evaluation report.

Social media activities concerning the EuroVelo route under assessment have to be up-to-date and to have a clear effect within the target group.

Smart phone apps should be evaluated with regard to:

- their transnational aspects and their reference to the topic of EuroVelo; the information policy of EuroVelo.com should also be met;
- the usefulness and level of detail of the information on the EuroVelo route;
- location-based services, practical information about accommodation, bike services etc.

4.2 Print communication

Guidebooks or detailed maps should be available and provide useful, detailed information on the EuroVelo route. The Europe-wide availability via (online) bookshops, the availability of multiple language versions, up-to-date information (at least not older than two years), suitable map scales and levels of generalisation would be core features of the aforementioned publications.

A detailed textual description of the route, of places and locations as well as of points of interests (cultural and natural attractions etc.) and a list of available services (accommodation, gastronomy, bike-workshops) would give added value to a publication.

ESSENTIAL CRITERION: At least one guidebook or a detailed printed map should be available on the whole route (in one or more publications). The map should be detailed enough to provide proper support for the orientation.

Other printed promotional tools are not an ECS requirement but can be included in the route evaluation report:

- Promotional leaflets / free overview maps should create a first idea of “what to see”, “where to go” and “what to do”.
- Advertisements in relevant public magazines or newspapers related to different defined source markets can be a useful approach for the promotion of a EuroVelo route.

4.3 Information along the route

Information boards, stands, panels and centres are evaluated with regard to their usability for cyclists. Information boards not specifically designed for cyclists could display useful information (i.e. about accommodation), but they need to provide all the data listed below to qualify for the assessment.

IMPORTANT CRITERION: At least one information board or centre along the route on a daily section.

The following information tools along the route shall be registered by the route inspector:

- Information board/panel – unstaffed, located in public space, electronic or not
- Information centre – staffed, offering printed promotion materials and/or assistance in locating specific services

To fulfil the criterion, a board or centre should be able to provide at least the following information for the daily section it is located on:

- Map of the route (can be provided in several parts by multiple boards)

- Location of accommodation, main attractions and bike repair shops

4.4 Additional promotional tools

All information tools listed below are not required by the ECS but can be included in the route evaluation report:

- **Public relations campaigns** towards all kinds of press representatives are also a valuable tool for the promotion of any EuroVelo route.
- **Events for the public** may play a role to enable a “first contact” of users or representatives of the press with the EuroVelo topic. The route operator should provide a detailed list of activities for the assessment process if available.
- **Branded merchandising products**, e.g. T-shirts, water bottles, bike panniers...
- Study trips for journalists.
- **Audio guides** can be independent products or integrated with the route's smartphone app.

5 Special cases

5.1 Public transport contingency

If one or more of the essential criteria are not fulfilled but the affected section can be substituted using a public transport connection meeting at least the important criteria, the route can still be certified if the public transport option is clearly communicated. This exceptional rule is limited to a total amount of 10% of all certified daily sections of the route.

If a public transport connection is an integral part of the route (e.g. a ferry to cross the sea), it should also be evaluated against the public transport criteria to determine the daily section's certification level, but it does not count towards the limit of 10% of all daily sections.

The distinction between public transport contingency and an integral part of the route is based on whether the lack of route continuity applies to bicycles only. If there is a road for cars (bridge / tunnel etc.) serving the same connection without an excessive detour, then the public transport connection is a contingency, otherwise (cars also need to take ferry or no connection for cars at all) it is an integral part of the route. For example, a ferry from Rostock to Gedser can be considered an integral part of the route (and not count towards the 10% limit of all daily sections) but taking the train between Copenhagen and Malmo is public transport contingency (there is a tunnel and bridge for cars).

5.2 Alternative itineraries

The needs of different target groups covered by the **additional criteria** can be addressed by alternative itineraries. An example for this approach might be one route variant for road cyclists (public roads with moderate traffic and very good surface quality) and another one for families with children (cycle and pedestrian paths, completely segregated from motorised traffic, but requiring slower riding because of pedestrian traffic). However, all variants should fulfil the essential and important criteria. A route where you have to choose between a busy national road and a muddy forest track cannot become a certified EuroVelo route.

The difference between route variants should be clearly communicated both in the information material (maps, guidebooks, apps) and on the route (signs, information boards). The distance between the variants should not exceed 5 km.



Example of alternative routes tailored to the needs of families with children and fast road cyclists.

6 Methodology

6.1 ECS in the route development process

The European Certification Standard can be useful in different stages of the route development:

EuroVelo route development stage	Role of ECS
Planning of the route	Identify a viable corridor with a strong theme
Route survey	Identify strong and weak points of the route
Action plan	Plan and prioritise actions to ensure consistent quality
Certification	Verify the results of implemented actions
Certified route	Periodically check the quality of the product

6.2 Survey

6.2.1 Route evaluation content

The survey should be based on field work and performed by authorised and trained experts traveling by bicycle and documenting the findings. The experts should only make use of publicly available resources (websites, public databases, printed documents etc.) to complete information not documented in the field.

The ECS aims to provide objective information about the route's quality, strong and weak points, both to the cyclists (final users) and to decision-makers (e.g. funding route development). The evaluation has to be transparent and comprehensible for the aforementioned groups. That is why it is necessary in practice not only to describe single incidents or give a general impression of the route but to document and quantify different aspects, such as the length of sections with different traffic levels or surface quality.

The complete route evaluation consists of:

- Data collected during the field work on the scale of 1 km and registered with the ECS app (e.g. surface quality, traffic, width, obstacles, signing, location of food or bike services)
- More incidental data collected during the field work and documented otherwise (e.g. accessibility of public-transport hubs that can be used to get to or from the route, promotion materials available in an information centre, languages of information boards)
- GPS track documenting the route followed (can be edited to remove mistakes, diversions etc.) and comparison of this track with
- Additional data collected in the office before or after the field work (e.g. national signing guidelines, public transport timetables or regulations, accommodation that is farther from the route)

The main aspects of the collected information should be stored in the EuroVelo database maintained by ECF. More detailed information (if it is collected) should be made available to the relevant stakeholders.

The evaluation of the findings should follow the current guidelines and the latest version of the annually updated handbook, published on the EuroVelo.org website.

Apart from certification, data collected during the survey can also be used to monitor the route development progress, compare different route variants, communicate strong or weak points of the

route. Numeric scores can be calculated to e.g. compare route quality with other certification systems, such as the ADFC-Qualitätsradrouten.

6.2.2 Using ECS application

The ECS application for surveying the route can be downloaded from ecfapp.com. The application requires a smartphone or tablet with an Android system.

It is highly recommended to periodically upload collected data to the ECF database, e.g. at the end of every daily section. Waiting with the upload until finishing e.g. 1000 km of the survey can result in data loss and a need to repeat the field work. The uploaded data can later be edited through ecfapp.com, there is no need to correct everything before uploading.

The app registers the GPS location (if it has access to this information):

- At the place of entering minor-section data;
- At the place of taking a picture.

As for now, the application does not register the complete GPS track. The route inspectors are required to use separate app or GPS receiver for that.

6.3 Certification

6.3.1 Certification process

The certification has been designed as a multiple-step process relying on the collection, compilation and analysis of publicly available data. The certificate will be awarded by the ECF after finishing this process. The steps of the certification are all to be performed together. There is no option just to perform some of the tasks and aim for the certification anyway.

The certification can only be initiated by a consortium of the relevant partners along the route (National EuroVelo Coordination Centres or Coordinators and their regional or national partners). The ECF should be informed about the certification process before it commences. The request should clearly indicate the itinerary and the partners should provide the funding.

The certification can only be performed by inspectors authorised by the ECF. Trainings for route inspectors will be provided by the ECF. A list of authorised experts will be made available on the EuroVelo.org website.

After data collection and the evaluation is finished, the leader of the consortium should submit a request including all relevant information to the ECF for the issuing of the official certificate.

The ECF will issue the certificate either for the whole route or for its major section – at least 300 km long, with clearly defined origins and destinations, e.g. major cities or attractions.

The validity for any certification is five years. Within this period, the members of the above-mentioned consortium are responsible for updating information relevant on the trans-national level in the EuroVelo.org database. After five years, the field work should be repeated.

6.3.2 Communication of results

The certification should clearly communicate the geographical coverage of the route.

All the stakeholders along the route can refer in their communication to the certified route or its section in the following way:

- “The EuroVelo [Number] - [Official name] is a certified high-quality route within the European cycle route network” (whole route)
- “The EuroVelo [Number] - [Official name] between [Start] and [Stop] is a certified high-quality route within the European cycle route network” (major section)

The certification should clearly communicate the conditions and indicate if there are any limitations regarding the recommended age, fitness level or bicycle needed to ride the route. These restrictions should be communicated per daily section, i.e.

If a daily section or several subsequent daily sections fulfil...	It should be communicated as:
All Essential, Important and Additional criteria	“The section between [start] and [stop] is recommended for all kinds of cycle tourists.”
All Essential and Important criteria	“The section between [start] and [stop] is recommended for occasional and regular cycle tourists.”
All Essential criteria	“The section between [start] and [stop] is recommended for regular cycle tourists only.”

For guidelines on communication of EuroVelo routes that are not certified yet but for example signed including EuroVelo logos, consult EuroVelo.org.

The ECF will regularly update the overview map on the EuroVelo.com website showing which parts of the network are certified.



Certified EuroVelo route logo.



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- EuroVelo 10 – Biking South Baltic
- EuroVelo 1 – AtlanticOnBike

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