

Study results:

Traffic impact of protected bike lane on Müllerstraße

Background information:

Müllerstraße is a 3.7 kilometer-long main road in the Wedding locality of Berlin's Mitte district. It is a central traffic axis with a high traffic density and an important connection to the center of Berlin. At the same time, Müllerstraße is one of the main shopping streets in Wedding. The three-lane road is used by motor vehicles, cyclists and buses alike. For a long time, there only was limited cycling infrastructure in the form of a non-continuous bike path on the curb (300 m); in large parts of Müllerstraße, cyclists had to use the carriageway. Thus, the conditions for cyclists were unattractive and dangerous over long stretches of Müllerstraße, partly also due to the high speeds of motor vehicles, delivery traffic and illegal double-parking.

Measures implemented:

After a sectional bike lane was installed for the first time in 2010, from July 2022 to June 2023 work was carried out to close the gap in the 1.5 kilometer long section between Seestraße and Fennstraße. A bike lane protected by bollards was set up in both directions of travel, at the expense of a parking lane. The protection elements are only interrupted at bus stops. The work was carried out in three phases: July 2022 (Leopoldplatz - S/U Wedding section), May 2023 (S/U Wedding - Fennstraße section) and June 2023 (Seestraße - Leopoldplatz section). Cycling now has its own infrastructure along the entire length of Müllerstraße for the first time. Also, a delivery zone has been designated on the right-hand lane for the period between 9 a.m. and 3 p.m. and between 6 p.m. and 10 p.m. in order to ensure delivery traffic.



Traffic volume: Counts commissioned by the Berlin Senate

The amount, composition and speed of motor vehicles in Berlin is measured at over 240 locations using infrared detectors (so-called TEU = Traffic Eye Units). For the analysis of the development of traffic volume on Müllerstraße, the two closest TEUs were used for each direction of travel (see Figure 1), although these are not located directly on the section on which the bike path was implemented. Nevertheless, it can be assumed that the change caused by the bike path also has a potential impact on the adjacent sections of Müllerstraße.

For the study, the period from June to September 2021 was compared with the same period in 2023. The traffic model shows that the average volume of motor vehicles decreased by a good 9 percent (southern section of Müllerstraße) respectively 17 percent (northern section) from 2021 to 2023.¹ However, taking into account the general trend of a decline in motor vehicle traffic in Berlin (on average minus 14% from 2019 to 2023),² it cannot be assumed at this point in time that the installation of the bike lane has had a significant impact on the number of motor vehicles on Müllerstraße. Possible long-term effects could be assessed in a further study.

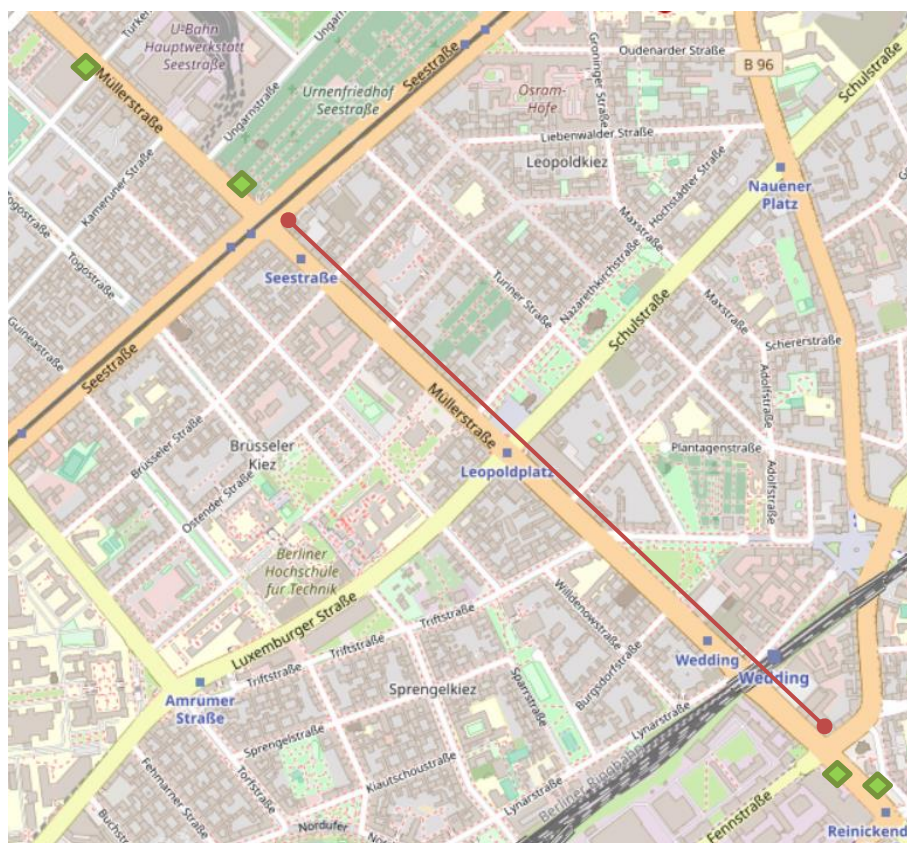


Figure 1: Müllerstraße. Marked are the section of the new bike lane and the vehicle measuring points.

¹ A continuous evaluation of the years 2021 to 2023 is not possible due to numerous failures of the measuring points. In any case, the comparison of the years 2021 (before implementation of the measures) and 2023 (after implementation) is decisive for the development.

² <https://www.tagesspiegel.de/wirtschaft/mobilitaet/minus-14-prozent-in-berlin-autoverkehr-in-deutschen-stadten-erlebt-drastischen-ruckgang-10387375.html> (Access: 10/30/23).

Cycle traffic counts based on the Strava Metro mobility data platform

The Berlin Senate Administration for Mobility, Transport, Climate Protection and the Environment (SenMVKU) operates 20 automatic permanent counting stations for the continuous recording of bicycle traffic. There is no cycle traffic counting station on Müllerstraße, so other data sources have to be used in order to quantify the development of cycle traffic. For this purpose, data from the mobility platform Strava Metro is used.

A comparison with the figures from the Senate Administration shows that Strava records around 1.3 per cent of all cycling traffic movements in Berlin.³ The proportion of recorded movements was calculated as an annual average and then applied to the figures contained in Strava, so that a valid statement can also be made for roads not covered by permanent counting points. To analyze the development on Müllerstraße, the cycle traffic figures were evaluated at two different points for each direction of travel.⁴

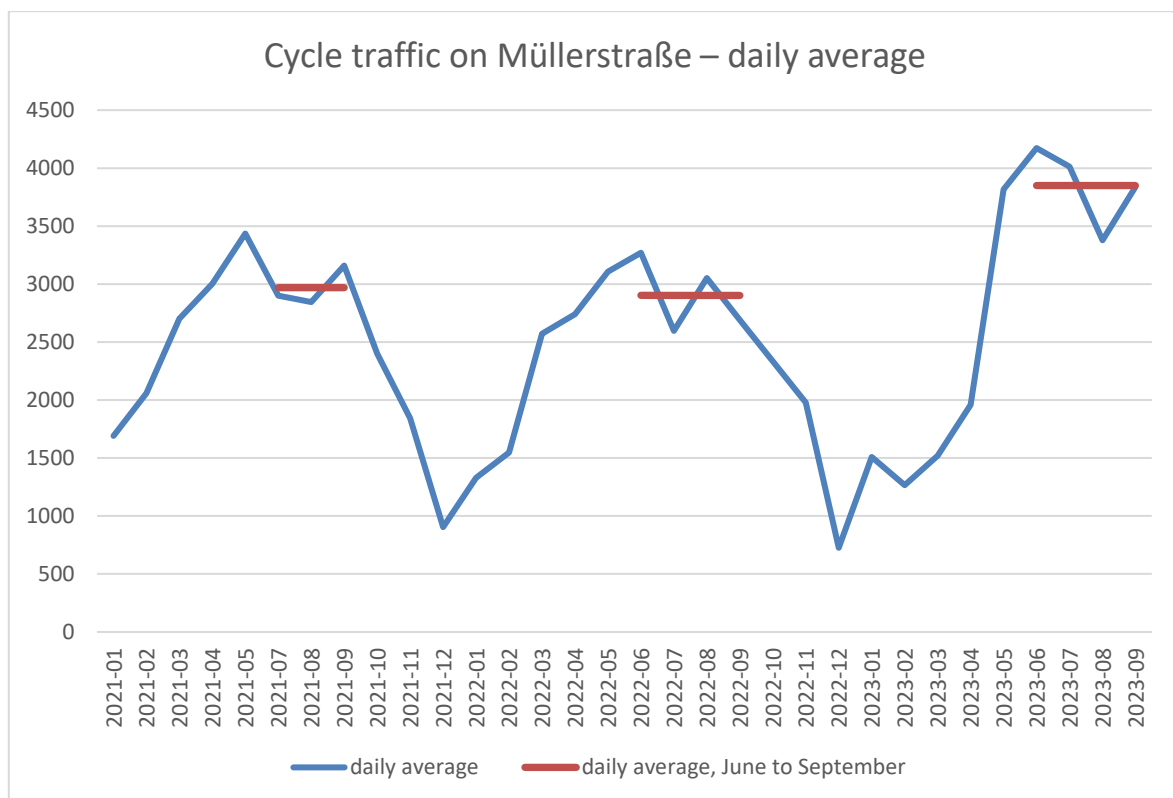
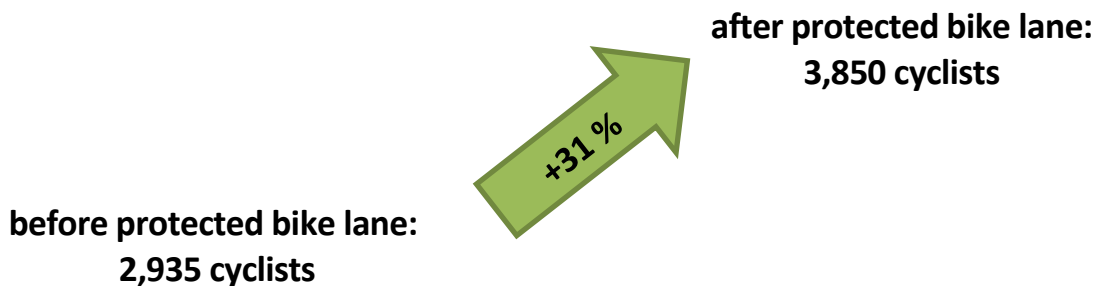


Figure 2: Development of cycle traffic on Müllerstraße, daily average. Data by Strava Metro; calculation: Environmental Action Germany.

³ This share is stable over the years 2020 to 2023; the maximum deviation from the average value for the years is 0.05 percentage points.

⁴ In the evaluation, enormous deviations which can be caused by, e.g., bicycle demonstrations were removed.

In summer 2021 – before the measures were implemented – the daily average was 2968 cyclists on Müllerstraße (see Figure 2). In summer 2022, the average was 2902 cyclists. This decrease of around 2 percent is within the range of survey inaccuracy, so it can be concluded that the number of cyclists remained constant from 2021 to 2022. Averaged over the years 2021 and 2022, the daily average in summer is 2935 cyclists. In 2023, the average is 3850 cyclists per day; this corresponds to an increase of a good 31 percent compared to the years 2021 to 2022.⁵



One thing to consider in the evaluation is that the measures were only completed in June 2023, i.e. during the comparison period used. Moreover, common route planners such as Google Maps still do not include the new measures in route planning for cycle traffic, as of October 2023 (see Figure 3). Against this background, it is to be expected that cycling traffic on Müllerstraße will continue to increase.

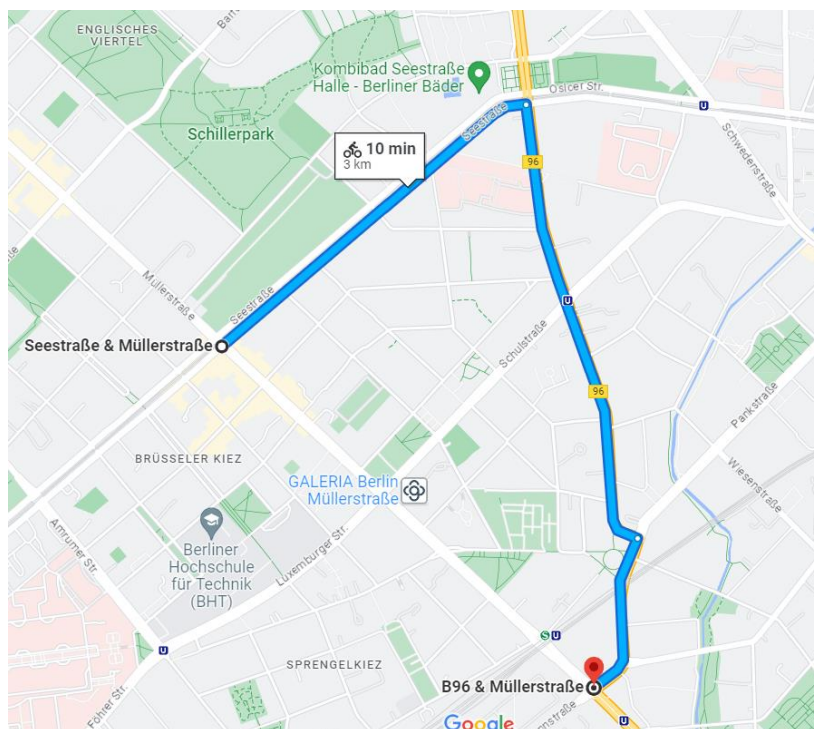


Figure 3: Routing for cyclists on Google Maps (as of October 2023). Source: GeoBasis-DE/BKG; Google.

⁵ It should be emphasized that the last measures were carried out in June 2023, the inauguration of the route by the district councillor took place in September 2023.

Interpretation:

While no clear correlation can be established between the decrease in motor vehicle traffic in the Müllerstraße area from 2021 to 2023 and the installation of the bike lane, the significant increase in bicycle traffic by 31 percent can clearly be attributed to the installation of the bike lane. An evaluation of the figures for the entire period of 2023 and possibly 2024 could validate this analysis.

When interpreting the results, it should also be noted that an increase in cycling figures is only recorded after the measures have been fully completed and not after the implementation of the first measures in 2022. This leads to the conclusion that the continuity of safe infrastructure is a decisive factor in the attractiveness of cycling. Against this backdrop, closing gaps in the cycling infrastructure is particularly important.

About the project:

From October 2020 to October 2022, DUH worked on the project "Pop-up Republic: Mobility Transition in Berlin" which was funded by the international city alliance ICLEI as part of the ICLEI Action Fund. The aim of the project was to collect, process and analyze environmental data in order to objectify discussions about the transport transition. The impact of new cycle paths with a special focus on pop-up cycle paths, parking space management, neighborhood-related traffic calming and 30 km/h on traffic volume and composition as well as on NO2 pollution was examined in order to be able to make well-founded statements about the impact on air quality and climate.

Müllerstrasse was evaluated in addition to the project. Further evaluations can be found on the project website: <https://www.duh.de/pop-up-republic/manual/>



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