

Survey results:

The traffic-calmed Bergmannkiez

Background situation:

After years of preparation and with the extensive participation of citizens, the entire Bergmannkiez neighbourhood is to have its traffic system redesigned and thus become a model project for the neighbourhood of the future. The redesign of the central Bergmannstrasse plays an important role in this. Step by step, this street is to become car-free. The goal is to eliminate through traffic throughout the Bergmannkiez.

The concept developed by the District Office is based on the results of extensive citizen participation during the test phase as a meeting area with 'parklets' and coloured road markings. Interventions in road traffic were already taking place during the meeting zone phase, which has to be taken into account in the before-and-after analysis. Traffic calming started in May 2021, with a ban on through traffic ("residents only") on most streets in the neighbourhood, with the exception of Friesenstrasse and Zossener Strasse. At the same time, the speed limit was reduced to 20 km/h on several streets.

In June, the second phase of traffic calming on Bergmannstrasse, between Nostitzstrasse and Zossener Strasse started with the following measures: A protected two-way cycle lane, installation of green elements, reduction of the speed limit to 10 km/h, one-way street regulation, additional delivery areas and crossing areas for pedestrians (see Figure 2).



Figure 1: Bergmannstrasse in July 2021

In the next step, Zossener Strasse and Friesenstrasse were separated from the superordinate road network and a ban on through traffic ("residents only") was imposed here as well. To reduce through traffic, a one-way street system was gradually introduced for some street sections and the entrance areas to the Bergmannkiez were redesigned. In this phase, pedestrian zones were established to the north and south of Chamissoplatz.

For the design of the planned pedestrian zone in Bergmannstrasse, the District Office announced an urban planning competition (the deadline for applications ran until June 2022). The street is to be made climate-resilient; the planned greenery and water elements (drinking fountains, water features) will lower the temperature of the street through evaporative cooling and shade, thus improving the quality of time spent on the street.¹ In June 2022, additional measures to restructure traffic in the neighbourhood began, but the impact of these measures is not considered further in this report. These include further measures to reduce the through traffic of cars.



Figure 2: Plan for Bergmannkiez after final traffic calming. Source: BAFK, raumscript

Volume of traffic: Surveys commissioned by the Berlin Senate

LK Argus GmbH was commissioned by the Berlin Senate Department for the Environment, Urban Mobility, Consumer Protection and Climate Action (SenUMVK Berlin) to prepare a before-and-after study of the Bergmannstrasse meeting zone implemented between October 2018 and September 2019, for which motor traffic volumes and vehicle driving speeds, bicycle and pedestrian traffic volumes were collected. The motor vehicle data for Bergmannstrasse from this study was used for the initial situation.

¹ <https://www.berlin.de/ba-friedrichshain-kreuzberg/aktuelles/pressemitteilungen/2022/pressemitteilung.1217600.php>

However, the traffic calming that followed in the meeting zone in the Bergmannkiez is not part of the study report.

Traffic figures for the period following the implementation of the traffic calming measures were taken from various studies commissioned by the Friedrichshain-Kreuzberg District Office. On the one hand, traffic counts were carried out by VerkehrsConsult Dresden-Berlin GmbH at various times in November 2021, and on the other hand, a traffic flow count was carried out at the Bergmannstrasse / Nostitzstrasse junction by stadtraum Gesellschaft für Raumplanung in February 2022.

The traffic counts by VerkehrsConsult Dresden-Berlin GmbH were carried out on the sections of Bergmannstrasse between Mehringdamm and Nostitzstrasse as well as between Zossener Strasse and Friesenstrasse###. The traffic counts for the section between Nostitzstrasse and Zossener Strasse (the area with the two-way cycle lane), were taken from the traffic flow count at the Bergmannstrasse / Nostitzstrasse junction. The counting results were converted to daily DTVw values using the daily traffic flow records from the results report of the Berlin Road Traffic Census 2019.

	Initial situation	Meeting zone 2019	Traffic calming since 2021
Between Mehringdamm and Nostitzstrasse	8,400	6,600	3,600 to 5,400
Between Nostitzstrasse and Zossener Strasse	6,000 to 7,000	4,500 to 5,600	1,500
Between Zossener Strasse and Friesenstrasse	8,300 to 9,800	3,600 to 5,700	9,200 to 12,000

Table 1: Motor vehicle traffic volumes on three sections of Bergmannstrasse before and after the redesign

The section between Nostitzstrasse and Zossener Strasse, in particular, shows a significant drop in the number of vehicles from almost 7,000 to only 1,500 vehicles. The adjacent section of Bergmannstrasse towards Mehringdamm was also substantially relieved of vehicle traffic. Whereas 8,400 vehicles per day were counted here before the redesign, the traffic volume fell to about 4,500 vehicles.

The situation is quite different on the short section of Bergmannstrasse between Zossener Strasse and Friesenstrasse, where there has been a considerable increase in motor vehicle traffic. While the traffic load was originally around 9,000 vehicles per day, it fell by almost half to 4,650 vehicles per day during the meeting zone phase in 2019. With the redesign of the Bergmannkiez and the traffic calming in many streets in the neighbourhood, traffic flows concentrated on Zossener Strasse, Friesenstrasse and the short section of Bergmannstrasse between them, and the number of vehicles increased to 10,750 per day.

Cycle traffic counts using the Strava Metro mobility data platform

The SenUMVK operates 18 automatic permanent counting stations² for the continuous survey of bicycle traffic. There are none of these in the Bergmannkiez, however, so other data sources have to be used to quantify the development of cycle traffic. Therefore, data from the Strava Metro mobility platform is used to obtain cycle traffic figures for Bergmannstrasse, which is centrally located in the Bergmannkiez.

A comparison with the official values from the counting stations of the Berlin Senate Department shows that Strava records about 1.3 percent of all cycling movements in Berlin - with the trend increasing. The proportion of movements recorded was calculated as an annual average and applied to the figures contained in Strava for the Bergmannkiez, so that a statement can also be made for streets that are not covered by the permanent counting stations. Here, the average daily number of cyclists on Bergmannstrasse at the level of house number 97 was taken as an example (see Figure 3).

In the twelve months prior to the establishment of the protected two-way cycle lane on Bergmannstrasse, the number of cyclists recorded at number 97 averaged 3,200 daily. Following the implementation of the traffic calming measures and the introduction of the protected cycle lane, an average of 3,580 movements per day were recorded. This represents an increase of 11.9 percent compared to the previous period.

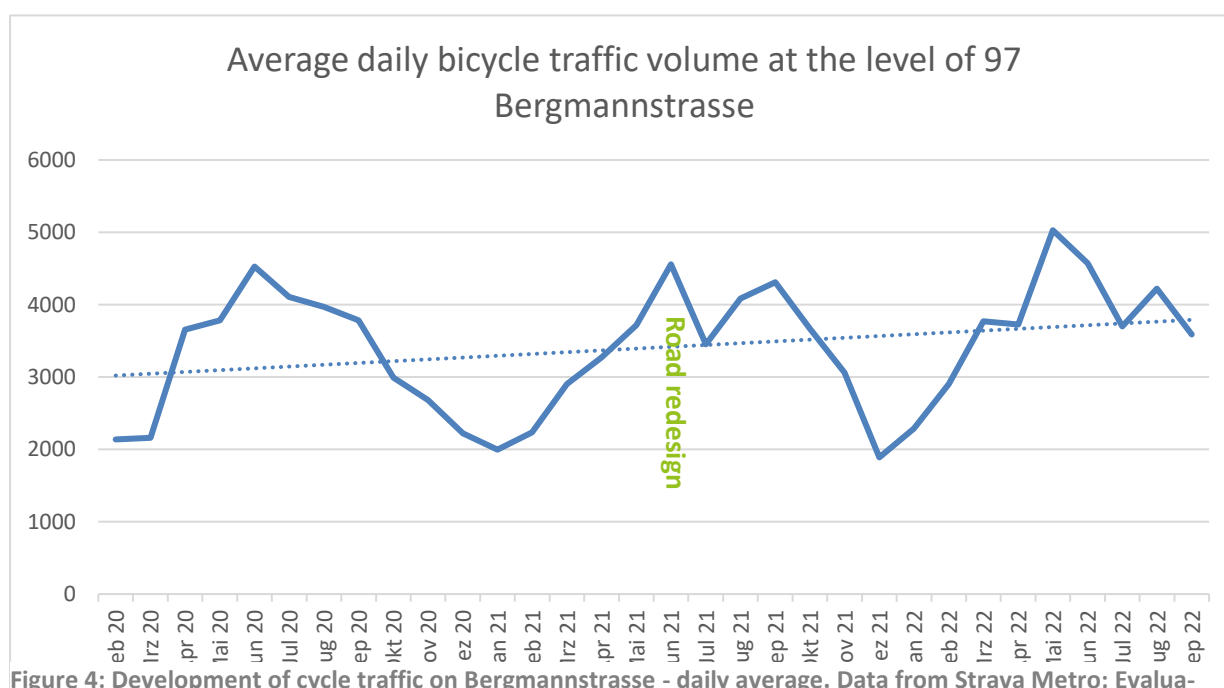


Figure 4: Development of cycle traffic on Bergmannstrasse - daily average. Data from Strava Metro; Evaluation: Environmental Action Germany

² <https://www.berlin.de/sen/uvk/verkehr/verkehrsplanung/radverkehr/weitere-radinfrastruktur/zaehlstellen-und-fahrrad-barometer/>

3,580 bicycles per day afterwards



3,200 bicycles per day before

For comparison: After a sharp increase in cycle traffic in Berlin in 2020 in connection with the Corona pandemic, cycle traffic figures declined again in 2021. Cycling figures in 2021 were 10.5 per cent lower than in the record year of 2020. Especially in the summer months, the number of cyclists increased significantly in 2020, presumably because holiday trips had dropped to an absolute minimum in 2020. Contrary to this trend, a further increase in cycling numbers was recorded on Bergmannstrasse in 2021.

Air quality: Nitrogen dioxide measurements by Environmental Action Germany (DUH):

Since neither the District nor the Berlin Senate have recorded the air quality, DUH has been measuring the air quality on the central Bergmannstrasse at the level of house numbers 4, 13 and 92 since September 2020. NO₂ concentrations were measured about eight months before and eight months after the traffic calming measures. The pollution at all three measuring points decreased significantly. On average, NO₂ levels dropped from 24 µg/m³ to 21 µg/m³. This corresponds to a reduction of 12.5 percent. Thus, the pollution levels at this formerly busy road only slightly exceed the background pollution levels at the two closest Berlin background measuring stations in Schöneberg (18 µg/m³) and Neukölln (19 µg/m³).

Classification:

Large parts of the Bergmannkiez neighbourhood have been considerably relieved of motor vehicle traffic through the traffic calming measures. This has been accompanied by a significant increase in cycle traffic numbers, even in contrast to the Berlin trend, which is showing a decline in cycle traffic after the record year of 2020. This also resulted in better air quality. Exposure to the diesel exhaust poison nitrogen dioxide fell by 12.5 percent and is now only a few micrograms above the large-scale background pollution level in Berlin.

However, the motor vehicle traffic has not disappeared, but has concentrated on the north-south road Zossenerstrasse / Friesenstrasse and the short section of Bergmannstrasse in between. It is recommended that through-traffic be effectively banned here in order to achieve a concentration of vehicle traffic flows on Mehringdamm and to further relieve the residential neighbourhood. This is exactly what is planned for the final redesign of the Bergmannkiez (see Figure 2): The section of Bergmannstrasse that currently has the highest traffic volume will be integrated into the emerging pedestrian zone, thus effectively preventing through traffic on the north-south axis.

About the project:

DUH has been working since October 2020 on the project "Pop-up Republic: New Mobility Berlin", which is funded by the international association of cities ICLEI within the framework of the ICLEI Action Fund. The aim of the project is to collect, prepare and analyse environmental data in order to objectify discussions about the transition of mobility. The impact of new cycle lanes – with a special focus on pop-up cycle lanes, parking space management, neighbourhood traffic calming measures and 30 km/h speed limits – on the volume and composition of traffic as well as on NO₂ pollution will be investigated in order to be able to make informed statements about the impact on air quality and climate.

In addition to data on the Bergmannkiez, numerous other analyses have been conducted and are published on our website: <https://www.duh.de/handbuch-pop-up-republik/>. These include, among others, the following analyses:

- Kantstrasse pop-up cycle lane
- Kottbusser Damm and Kottbusser Strasse pop-up cycle lane
- Improved cycling facilities Frankfurter Allee
- New cycling facilities and 30 km/h speed limit Hermannstrasse
- Tempelhofer Damm bicycle traffic system and 30 km/h speed limit



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Environmental Action Germany

Radolfzell Office
Fritz-Reichle-Ring 4
78315 Radolfzell
Tel.: 0 77 32 9995-0

Berlin Office
Hackescher Markt 4
Entrance: Neue Promenade 3
10178 Berlin
Tel.: 030 2400867-0


Contacts

Robin Kulpa
Deputy Head of Transport
and Air Quality Department
Tel.: 030 2400867 - 751
email: kulpa@duh.de

Hanna Rhein
Transport and Air Quality Officer
Tel.: 030 2400867 - 754
email: rhein@duh.de

www.duh.de [@ info@duh.de](mailto:info@duh.de) [environmental action](https://twitter.com/environmentalaction) [f en-](https://www.facebook.com/duh.de)

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 Environmental Action Germany (DUH) is recognised as a non-profit environmental and consumer protection organisation. It has been awarded the DZI Seal of Approval for donations. Charitable will bequests are exempt from inheritance and gift tax.

We have been campaigning for climate protection and fighting for the conservation of nature and biodiversity for over 40 years. Please help us with a donation – for the future of nature and mankind. Thank you very much! www.duh.de/spenden