

## Survey results:

# Traffic impact of Frankfurter Allee pop-up cycle lane

### Background situation:

Frankfurter Allee is the extension of Karl-Marx-Allee towards the east with a length of 3.6 kilometres and is an essential part of the important B1 main road. On Frankfurter Allee there are in part older red-paved high-kerb cycle lanes. Especially in the areas around underground exits, these have led to conflicts between cyclists and pedestrians.

There has been a pop-up cycle lane on the north side of Frankfurter Allee heading into the city towards Alexanderplatz at the level of the Samariterstrasse underground station between Voigtstrasse and Proskauer Strasse since May 2020. This is an unprotected pop-up cycle lane with a length of approximately 450 metres. By shifting cycle traffic onto the road, the intention was to improve the situation for cycle traffic, but also, and above all, to improve the situation for pedestrians at certain places.



Figure 1: Situation at the Samariterstrasse underground station before implementation of the pop-up cycle lane



Figure 2: Pop-up cycle path north side of Frankfurter Allee heading towards the city centre

## Cycle traffic counts using automatic permanent counting stations

The Berlin SenUMVK operates a total of 18 automatic permanent counting stations for bicycle traffic, which continuously count all bicycles that ride past the detection cross-sections of the counting stations. Bicycle counting station #7 is located on Frankfurter Allee at the level of Ring-Center 1.

Although there has been an increase in the number of cyclists on Frankfurter Allee since 2019, this development does not significantly exceed the Berlin-wide trend. In 2020, the volume of cycling traffic increased by 25 percent compared to the previous year. For comparison: Throughout the whole of Berlin, cycle traffic increased by 22.6 per cent in 2020 compared to the previous year. In 2021, the volume of cycling traffic was again down by 7.5 percent compared to the previous year. In Berlin as a whole, cycle traffic in 2021 decreased by about 10 per cent compared to the previous year.

This shows that cycling volumes along Frankfurter Allee have developed slightly more positively than in the rest of the city, but no significant change in cycling flows can be recorded as a result of the pop-up cycle lane.

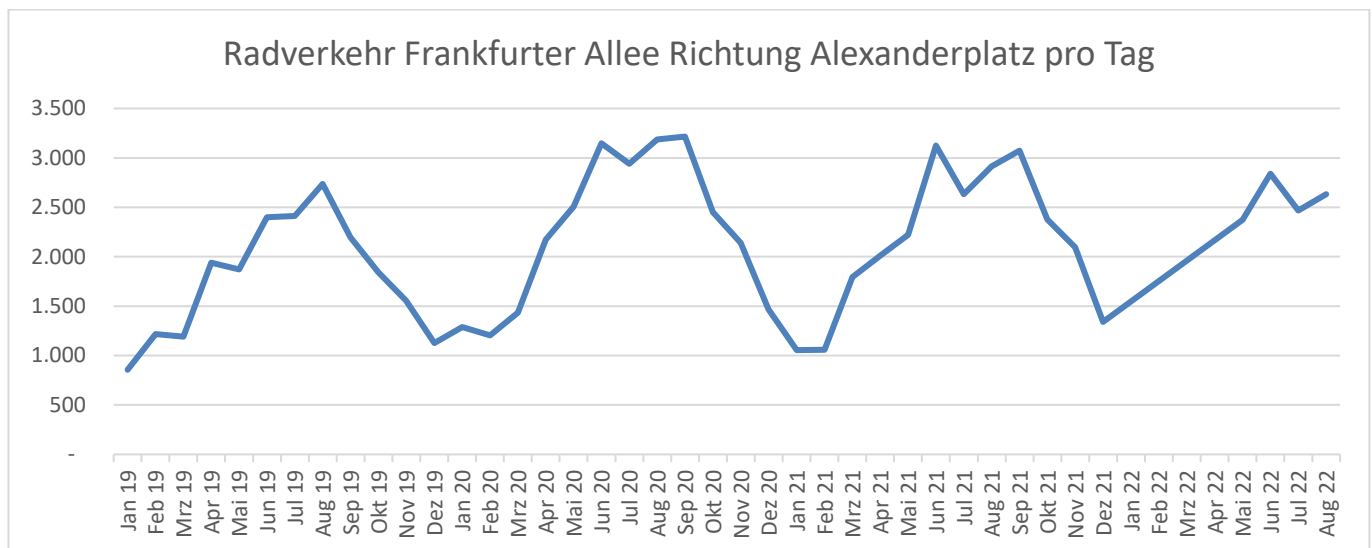


Figure 3: Development of cycle traffic on Frankfurter Allee - monthly averages. Data from the Berlin Senate Department for the Environment, Urban Mobility, Consumer Protection and Climate Action <https://data.eco-counter.com/ParcPublic/?id=4728>

## Volume of traffic: Vehicle counts commissioned by the Berlin Senate

There are two TEU traffic detectors on Frankfurter Allee, in the particularly critical area between Niederbarnimstrasse and Frankfurter Allee S-Bahn station. However, there were extensive construction measures on Frankfurter Allee between 1 April 2020 and 31 December 2021, including lane reductions for motor vehicle traffic.

In 2019, the TEU traffic detectors recorded traffic volumes of almost 45,000 motor vehicles per day on Frankfurter Allee. Since April 2020, traffic volumes have dropped to well below 38,000 vehicles per day. However, it can be assumed that this reduction in motor vehicle traffic is largely due to the construction sites. A clear correlation between the development of cycling infrastructure and a reduction in motor vehicle traffic cannot be drawn.

## Air quality: Nitrogen dioxide pollution in Berlin

The Berlin SenUMVK operates an automatic traffic-oriented measuring station at Frankfurter Allee 174 to measure, among other things, the concentration of the air pollutant nitrogen dioxide (NO<sub>2</sub>). NO<sub>2</sub> is mainly attributable to road traffic. The pattern of nitrogen dioxide pollution in Berlin varies from area to area: In residential areas, the pollution is considerably lower than on main roads.

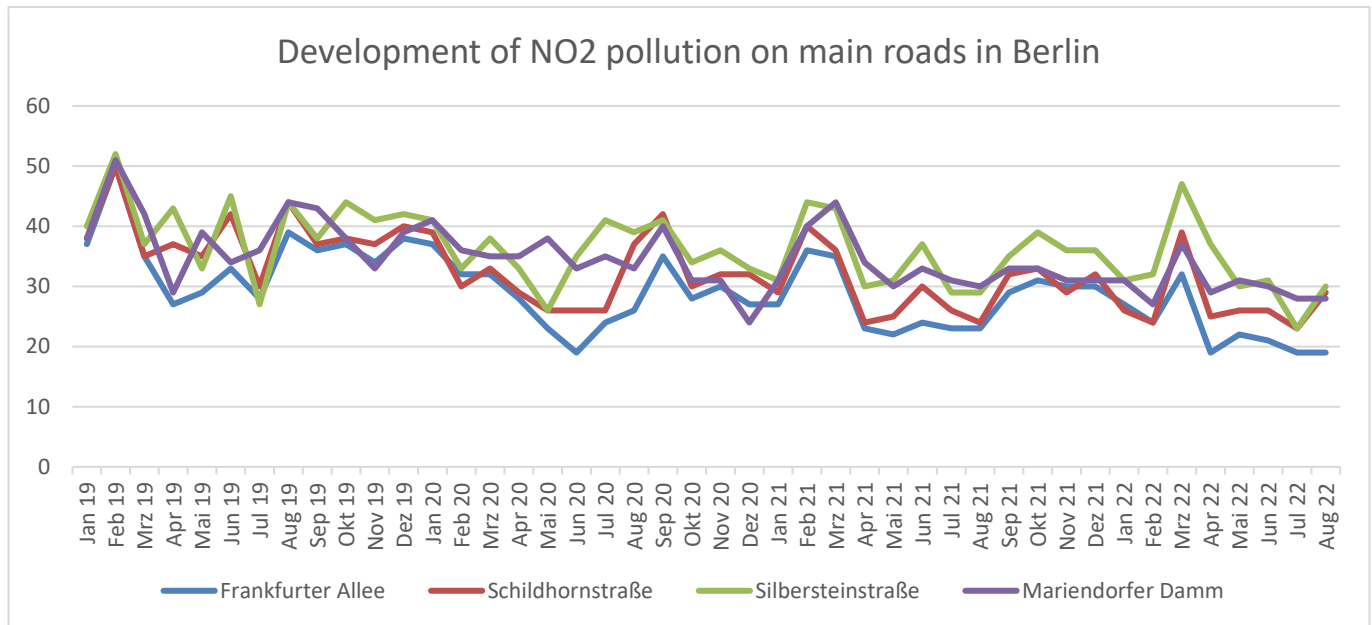


Figure 4: Development of NO<sub>2</sub> pollution on main roads in Berlin; Data: SenUMVK; Graph: DUH

In Berlin as a whole, NO<sub>2</sub> pollution has recently been on the decline. This decline is partly due to the Corona pandemic and partly due to a change in the registration procedure for new vehicles. It has now been ensured that modern vehicles not only comply with the mandatory exhaust emission standards on the test bench but also on the road. There is no noticeable trend on Frankfurter Allee that clearly deviates from the other main roads. Especially in the summer months, the level of pollution on Frankfurter Allee is lower than on the other main roads considered. This trend has been slightly more pronounced since 2020 than it was in 2019.

### Classification:

The pop-up cycle lane on Frankfurter Allee unfortunately gained notoriety through a tragic piece of news: A female cyclist was fatally injured in an accident in May 2021. The cyclist had to swerve to avoid a van parked on the cycle lane. In the process, she was hit by an articulated lorry and fatally injured.

During the study period, the pop-up cycle lane was not structurally protected against illegal driving and parking. The reason for this was that there were parking bays in the area behind the pop-up cycle lane, which would otherwise have been inaccessible to motorists. Therefore, when setting up the pop-up cycle lane, the preservation of a few parking spaces was prioritised over safety for cyclists. It was not until the end of the study period that the Friedrichshain-Kreuzberg District Office announced that the temporary pop-up cycle lane would be converted into a protected cycle lane. This measure eliminates almost all vehicle parking spaces in the section.

The study confirms the finding that without infrastructure that is both objectively safe as well as providing a subjective feeling of safety for cyclists, no significant increases in cycling numbers can be achieved. Reducing the safety of cycle traffic in favour of a few parking spaces is a dangerous and demonstrably ineffective measure. As soon as the protected cycle lane is completed, a new survey of various environmental and traffic parameters should be carried out.

## 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 NO<sub>2</sub> 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 Hermannstrasse, 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
- The traffic-calmed Bergmannkiez
- Tempelhofer Damm bicycle traffic system and 30 km/h speed limit
- Cycling facilities and 30 km/h speed limit on Hermannstrasse



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