Grafton Way Cycling Permeability Scheme Permanent Proposals Monitoring Factsheet

This document sets out data and other information gathered pre-scheme installation and during the trial period of the Grafton Way Cycling Permeability scheme. This scheme has provided eastbound contraflow cycling on Grafton Way from Fitzroy Street to Whitfield Street.

Data has been gathered and analysed to help assess the impact of the scheme during the trial period of operation. The data and feedback are summarised below.

Summary

A review of **'Before'** and **'After'** scheme data for the Grafton Way Cycling Permeability scheme area indicates the following:

Traffic levels overall on Grafton Way have increased post scheme implementation. 'After-scheme' traffic flows increased by 39% compared to 'Before-scheme' flows.

Following scheme implementation, average speeds have increased on Grafton Way (12.5mph to 17.3mph), remaining below the 20mph speed limit.

Cycling flows have increased post scheme implementation. Cycling eastbound has increased by 18% and cycling westbound has increased by 13%. Overall cycling has increased by 14%.

Annual mean NO_2 concentrations fell slightly between 2018-2019 and more significantly between 2019-2020. The annual mean for 2021 is not yet available but some month readings have been provided.

Analysis of the data indicates a total of two collisions were recorded between 1 January 2017 to 26 November 2020, before the scheme was implemented. Following the scheme implementation, no collisions have been recorded.

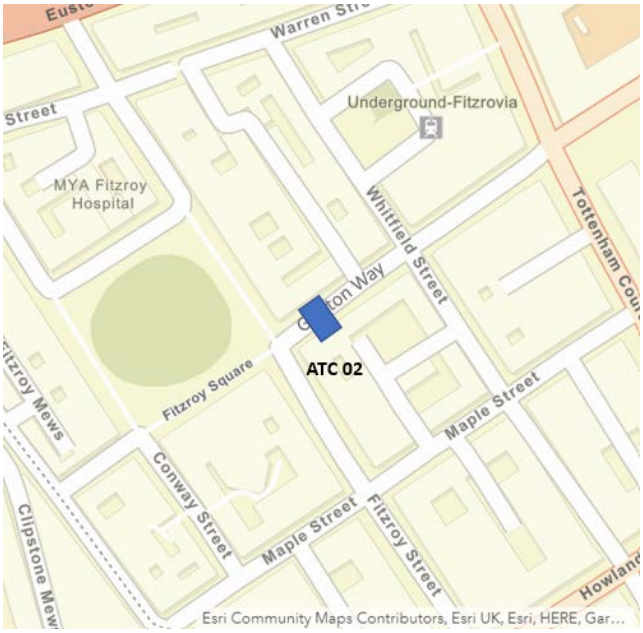
The scheme received some comments to the 'Safer Travel' inbox, which have been summarised. There were no comments provided on the "Safer Travel in Camden" Commonplace map.

Motor vehicle data

Automatic traffic counts (ATCs) were set up to collect **before scheme** data in August 2020 and **after scheme** data in October 2021. At this point the trial scheme had been in place for approximately 9 months.

Figure 1 shows the location of this traffic count 'ATC02'.

Figure 1: Location of traffic count



A methodology for this data collection is provided in **Appendix A**.

To establish whether there have been any changes in traffic flows on Grafton Way, **before scheme** traffic counts have been compared against **after scheme** traffic counts.

Table 1 shows the daily average vehicle counts for the full week of data collection. This shows a 39% increase in overall traffic travelling westbound on Grafton Way between August 2020 and October 2021. This result is much higher than expected and may be as a result of works on the public highway in the local area.

Table 1: Traffic Count Data: Daily Average Vehicle Counts (excluding cycles)

Motor Vehicles - daily average vehicle counts				
Road	**Direction**	**Aug-20**	**Oct-21**	**Change (%)**
Grafton Way	Westbound	1,008	1,396	39%

Total traffic data

It is recognised that the Covid-19 pandemic has had an impact on general traffic levels throughout London and in Camden.

However, analysis (comparing this data to the dates of the scheme traffic counts) shows that:

- **Inner London** – Average daily traffic volumes on the Inner London Transport for London Road Network were 5% higher in October 2021 relative to October 2020 based on data available from TfL; and
- **Camden** – Average daily traffic volumes were approximately 3% higher in July 2021 relative to October 2020 (excluding school holidays) based on

data from Vehicle Activated Signs at 13 sites in Camden (October 2021 data was not yet available at the time of writing).

Therefore, the results of the October 2021 survey data discussed in the 'Traffic count data' section should be broadly representative of changes in local area traffic rather than Camden or London more broadly.

Speed Data (Traffic Count Survey Data)

Speed data was collected in August 2020 (Before-scheme) and October 2021 (After-scheme); the speed data is taken from the ATC surveys presented in the earlier 'Traffic count data' section and has been presented for the westbound 7 day 24-hour average speed observed.

Motor vehicle speeds on Grafton Way have increased by 4.8mph following scheme implementation (12.5mph to 17.3mph). The speed limit on Grafton Way is 20mph. The observed speeds collected before and after-scheme suggest that whilst speeds have increased, the speed limit is still observed.

Cycling Data - Cycle Count Survey Data

Cycle data was collected in August 2020 (Before-scheme) and October 2021 (After-scheme); the cycling data is taken from the ATC surveys presented in the earlier 'Traffic count data' section and has been processed and analysed according to the process outlined in that section. The results are presented in **Table 2**.

Table 2: Traffic Count Data: Daily Average Cycle Counts

Cycling - daily average vehicle counts				
Road name (site ID)	**Direction**	**2020**	**2021**	**Change**
Grafton Way (ATC 02)	Eastbound	41	49	18%
	Westbound	143	161	13%
	Combined	184	210	14%

The data shows that between August 2020 and October 2021, on Grafton Way westbound there was an increase of 18 cyclists (13%) and eastbound there was an increase of 8 cyclists (18%).

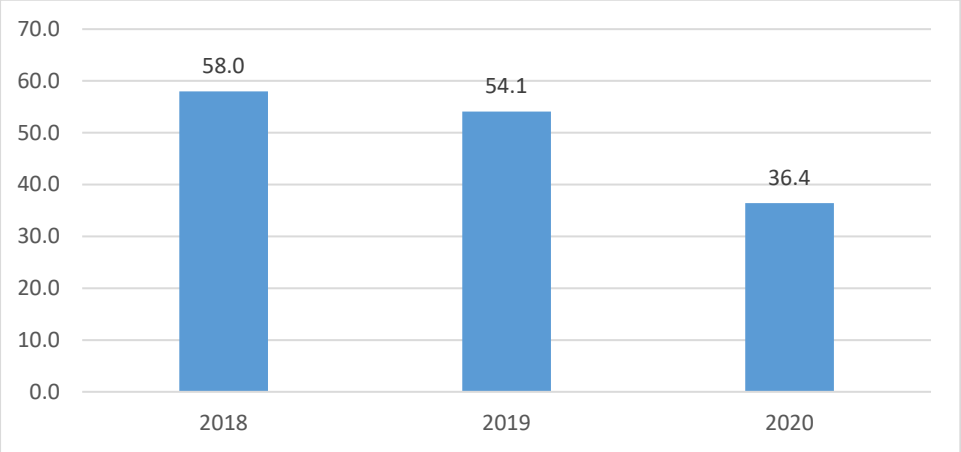
Overall, the results indicate a positive outcome following the implementation of the scheme, with an overall increase of 14% in the number of cyclists using Grafton Way despite the increase in motor traffic.

Air quality data

Camden monitors air quality across the borough. Air quality monitors called ‘diffusion tubes’ are in place on Grafton Way (Site ID: WEP2), near to the trial scheme.

Figure 2 provides data from previous years at the WEP2 air quality site and shows that the annual mean NO_2 concentrations fell slightly between 2018-2019 and more significantly between 2019-2020. COVID-19 restrictions will have impacted this decrease.

Figure 2: WEP2 bias-adjusted annual mean diffusion tube NO_2 data, µg/m^3



The raw and provisional month average NO_2 concentration measures at the site in 2021 are recorded in **Table 3**. Normally, this data would be ‘bias adjusted’ and annualised using the LLAQM.TG(19) methodology. However, since the ‘bias adjustment factors’ for 2021 will not be available until later in 2022, this data is presented in ‘raw’ form and must therefore be considered indicative and provisional at this stage.

Bias adjustment factors are continually reviewed and vary each year and are not published until the April of the following year. Therefore, we are unable to provide annual figures for the monitoring that has taken place at this site in 2021 until April 2022.

Table 3: Raw and provisional month-average diffusion tube NO_2 data (2021), µg/m^3

2021 NO_2 raw & provisional month average (µg/m^3)					
Site	**Jan-21**	**Feb-21**	**Mar-21**	**Apr-21**	**May-21**
Grafton Way (WEP2)	48.6	50.8	39.8	43.2	37.5

There are a couple of important caveats when considering ‘raw’ diffusion tube data:

- Typically, diffusion tubes over-estimate NO_2 concentrations and we therefore expect the annual mean for 2021 to be lower than the average of the individual month average NO_2 concentrations shown in the table; and
- We estimate that road transport contributes about half of NO_2 emissions in Camden. Approximately 40% is from buildings, from the use of natural gas for heating and power. Therefore, NO_2 emissions are always higher during colder periods when there is increased heating demand in residential and commercial properties which is why NO_2 concentrations are typically higher during winter months.

Compared with the month-on-month readings from 2020, the readings for 2021 have broadly stayed the same. It is therefore possible that air quality levels have remained steady at this site, however we will not know until the calculations described earlier have been performed.

We also note that that the expansion of the ULEZ on 25th October 2022 may have a beneficial impact on local air quality across the borough.

Collision data

STATS19 collision data (collected by TfL) has been reviewed for the most recent period available, running from 1 January 2017 to 30 June 2021. Collision data has been analysed on Grafton Way between Fitzroy Street and Whitfield Street.

Analysis of the data indicates a total of two collisions were recorded between 1 January 2017 to 26 November 2020, before the scheme was implemented. Both collisions occurred at the junction with Whitfield Street. One collision involving a motorcyclist occurred on 15/03/2017 and was classed as serious in severity. The second collision occurred on 20/07/2020, involved a pedal cyclist and was classed as slight in severity. Following the scheme implementation, no collisions have been recorded.

Feedback received during the Experimental Traffic Order (ETO) period

Residents and stakeholders were able to provide Camden with feedback via the "Safer Travel in Camden" Commonplace map and the Safer Travel inbox. No comments were left on the Commonplace map regarding this scheme. The following feedback was received to the Safer Travel inbox:

- Negative: one response
- Neutral: no responses
- Positive: one response

Those that were not supportive of the scheme shared safety concerns around cyclists using the road against the direction of traffic.

Feedback was also provided by the Royal National Institute of Blind People (RNIB) regarding Camden's wider programme of improvements in general, rather than this specific scheme. The RNIB provided details of principles to be followed when designing streetspace schemes to ensure accessibility and inclusivity for people with sight loss.

Appendix A: Traffic Data Methodology

Automatic traffic counts (ATCs) were set up to collect **before scheme** data in August 2020. Data was collected from Monday 3 August to Sunday 9 August 2020. ATCs were set up to collect **after scheme** data in October 2021. Data was collected from Wednesday 13 October to Tuesday 19 October 2021.

Data is logged in 15-minute intervals over the full 24-hour period on those days.

There were no periods of data loss for Site ATC02.

Data was collected according to vehicle class; the following vehicle types were recorded:

- Pedal cycle (PC)
- Motorcycle (MC)
- Car
- Light Goods Vehicle (LGV)
- Other Goods Vehicle 1 (OGV1) – heavy goods vehicle such as a lorry
- Other Goods Vehicle 2 (OGV2) – larger lorry, usually articulated
- Public Service Vehicle (PSV) – for example a bus or coach