

Summary analysis of NO₂ concentrations at four Scottish monitoring sites during the week 30 March to 05 April 2020 compared to 01 - 07 April 2019:

The current lockdown measures in place to control the spread of the Covid-19 pandemic has resulted in a dramatic drop in road traffic within Scotland's cities. It is well established that road traffic is the main source of oxides of nitrogen (NO_x) within these cities and so it is safe to assume that nitrogen dioxide (NO₂) concentrations will have decreased during the lockdown. The current situation provides an opportunity to investigate what improved air quality within Scotland's cities could look like in the future.

The following summary analysis provides an indication of the extent of the reduction in NO₂ concentrations at four roadside monitoring sites: Aberdeen Union St, Dundee Lochee Road, Edinburgh St John's Road and Glasgow Kerbside (Hope Street). It is important to note that the 2020 data are provisional at the time of carrying out this analysis and will be subject to further quality control.

Table 1 below details the average NO₂ concentrations measured at the four sites during the weeks 01 – 07 April 2019 compared to 30 March – 05 April 2020. NO₂ concentrations have decreased by 56%, 43%, 57% and 73% at Aberdeen Union St, Dundee Lochee Road, Edinburgh St John's Road and Glasgow Kerbside, respectively.

Table 1 Summary of average NO₂ concentration in the first week of April 2019 and 2020

| Site | Average NO ₂ Concentration (µg m ⁻³) | |
|-----------------------------------|---|--------------------------|
| | 01 – 07 April 2019 | 30 March – 05 April 2020 |
| Aberdeen Union Street | 39 | 17 |
| Dundee Lochee Road | 28 | 16 |
| Edinburgh St John's Road | 35 | 15 |
| Glasgow Kerbside (Hope St) | 75 | 20 |

The plots in Figures 1 to 4 show the hourly and daily variations in NO₂ concentrations. In general, a decrease in concentrations has been seen in most days of the week; this is especially apparent at Glasgow Hope Street.

Figure 1 Aberdeen Union St

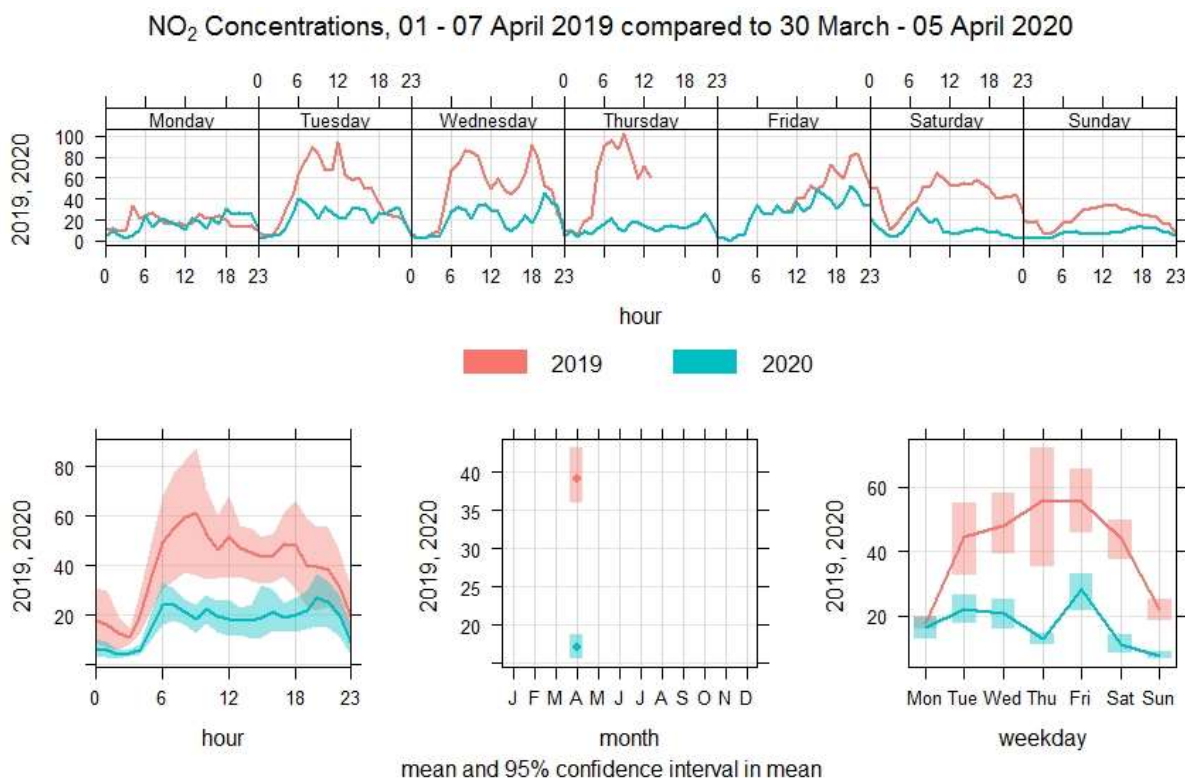


Figure 2 Dundee Lochee Road

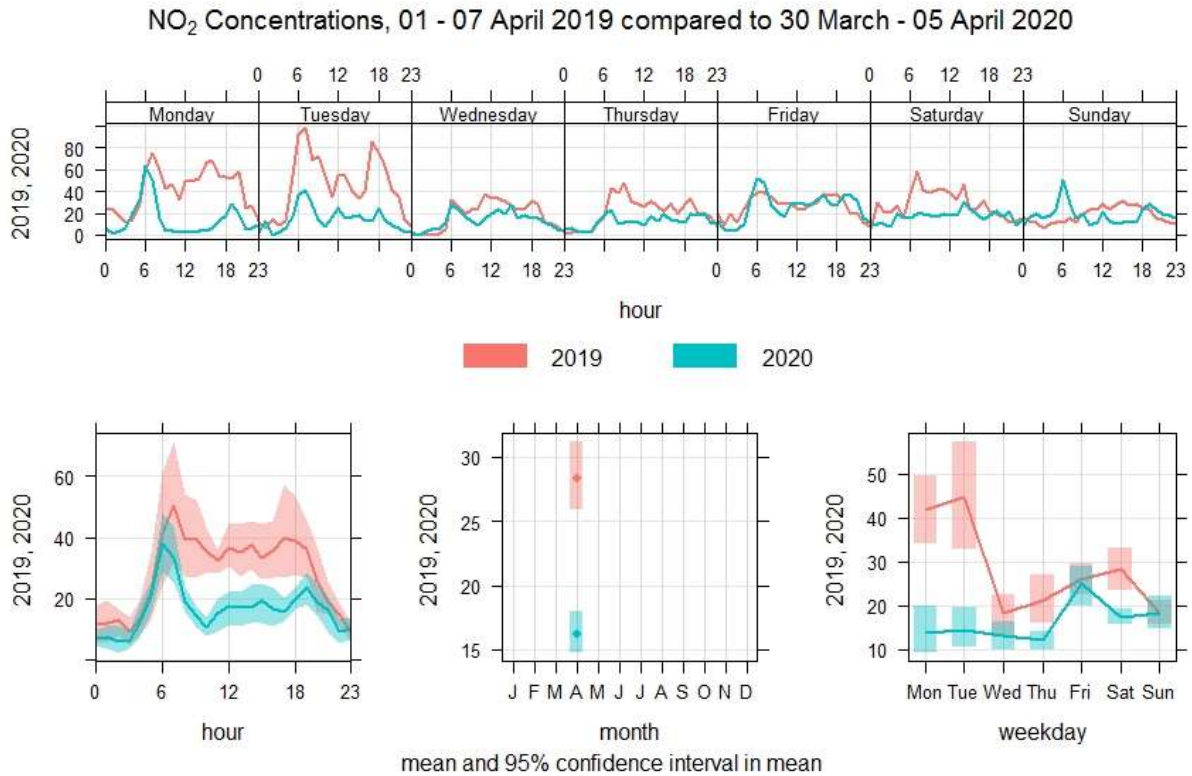


Figure 3 Edinburgh St John's Road

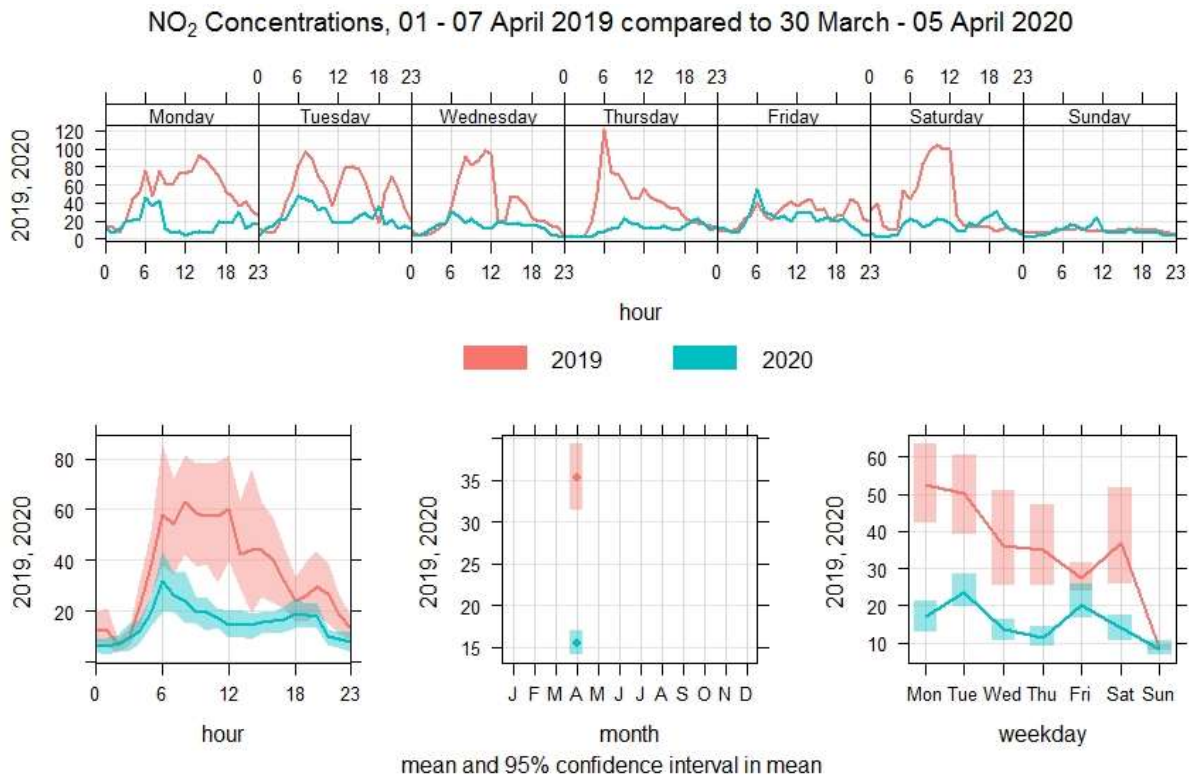


Figure 4 Glasgow Kerbside (Hope Street)

