

ANNEX 2: Scheme impacts and benefits

Any quoted figures in the following are based on supporting technical analyses and assessments of the proposed Traffic Filters as consulted on between 5th September and the 13th October.

Changes in traffic and transport demand

1. As a result of the scheme car person trips wholly within the city are forecast to reduce by 20% overall, equivalent to 24,800 fewer trips across the average 12-hour weekday (07:00 to 19:00). The reduction in total, including trips to or from the city, is around 26,300, which represents a reduction of 9% in total car trips to, from and within the city.
2. Traffic flows are forecast to reduce by an average of 20% across the city as a whole and 35% in the city centre. The largest reductions in traffic levels are forecast in the city centre and on the main roads within the B4495 arc.
3. The traffic filters will cause some vehicles to divert via the ring road, potentially increasing the flows on the outer sections of some radial roads within the city and on the ring road (A34, Eastern By-Pass Road and A40).
4. This includes forecasts of significant increases on the A4144 Woodstock Road; however, further analysis of detailed lane allocations at the entry to the Wolvercote Roundabout (which the Strategic Model cannot represent), and existing delays, has shown that there is insufficient capacity to achieve these increased traffic forecasts, so we would expect any increases to be lower. The proposed northbound bus lane on Woodstock Rd will also protect buses from any increases in delay on this section.
5. Traffic increases are also forecast on Botley Road west of the junction with Seacourt Park and Ride by around an average 10% across a typical weekday, whereas on Hythe Bridge Street traffic is forecast to reduce by around an average 50% across a typical weekday. On the inner section of Botley Road at Osney Bridge, weekday flows are expected to reduce by 4% but it is acknowledged there is a risk of increases in traffic at certain times of the day (e.g. weekends, when Westgate is busiest) as a result of the traffic filters.
6. On the A34 near Oxford and Botley, transport modelling is forecasting an increase in flows within the range of +0-9%, varying by location and direction. It is worth noting that observed current flows (2022) on the A34 remain 5-10% below pre-pandemic levels (2018/19).

Bus Performance and Demand (incl. Park and Ride)

7. The total forecast increase in bus trips on an average weekday between 0700 and 1900 is around 2,400 trips with a further 650 increase in Park and Ride. As a result of the pandemic and the lasting behavioural impacts (e.g. more home working) Park and Ride

demand remains significantly below the levels seen pre-pandemic, so forecast increases in Park and Ride use can be accommodated at existing sites if the trial is approved.

8. Overall, the bus journey time reduction within the inner sections of the city, where traffic flows reduce significantly, is expected to be around 15% in the AM and PM peak periods, and around half that level in the inter-peak (when congestion levels are typically lower). This equates to an average journey time reduction of around 10% over the day, as a result of the traffic filters.
9. The efficiency savings that improved journey times will deliver will help support the introduction of new bus services, including improved services across Oxford's 'Eastern Arc'. Across the Oxford SmartZone area as a whole, bus productivity is expected to increase by 6.5% as a result of the traffic filters.

Walking and Cycling

10. As a result of the filters, walking and cycling trips on an average weekday between 0700 and 1900 are forecast to increase by almost 20,000, the majority of which (17,500) are wholly within the city.
11. Traffic filters would significantly reduce traffic levels in the city, and hence improve the quality of environment and safety (real and perceived) that will, in its own right, encourage increased cycle demand.
12. The traffic filters will also require existing private car trips (those not exempt or using a resident day pass) to consider alternatives. For some trips this will involve re-routing but the improvement in the cycling environment will encourage others to transfer from car to cycle.

Air Quality

13. An air quality assessment has been performed to understand the impact of the traffic filters scheme in 2024 in terms of nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}). The area assessed covers both the Oxford City and Botley AQMAs. The assessment confirms the scheme would not result in any exceedances of the national air quality objectives. NO₂ concentrations, are predicted to decrease on 76% of the assessed road links and at 91% of existing monitoring locations as a result of the filters.
14. Road links which show a predicted increase in NO₂, PM₁₀ and PM_{2.5} concentrations as a result of the scheme are located on road links outside of the city centre. This includes the A420 Botley Road near Botley Interchange and A4144 Woodstock Road near Wolvercote Roundabout (both for NO₂), but again, the scheme does not result in any exceedances of the national air quality objectives.

Road Safety

15. As a result of the traffic filters, the overall total number of road casualties is forecast to reduce by 34 annually – a reduction of 9% compared to the 2015-19 annual average.
16. Cycling casualties, which are more spatially concentrated in areas where traffic is forecast to reduce, are estimated to decrease by around 13%, whereas motorised casualties are estimated to reduce by around 6% (and pedestrian casualties to fall by 10%).
17. However, the modest net forecast increase in traffic on the ring road is forecast to result in an increase in casualties on the ring road of 5% (this equates to approximately three additional casualties annually).

Business Impacts

18. A qualitative assessment of potential impacts of traffic filters on businesses – looking at type, size and location of business – has been undertaken. Overall, traffic filters will benefit the majority of modal users travelling for leisure and commuting purposes, and benefit business trips undertaken on all modes. In addition, traffic filters will deliver a range of benefits that aim to improve the overall quality of life for residents in the form of reduced air pollution and improved health and enhanced place and urban environment and support the overall vision to deliver economic success in a way that is low-carbon, inclusive and sustainable.

Climate action

19. A Climate Impact Assessment for the traffic filters concluded the scheme will have a net positive impact particularly in terms of reducing travel by private car and increasing use of walking, cycling and public transport. Also, the traffic filters will support the introduction of brand-new electric buses accelerating electrification of transport in Oxfordshire.
20. Separately, an assessment of changes in CO₂ by 2024 as a result of the traffic filters, compared to a scenario without the filters in place, shows a 6% reduction in total annual CO₂ emissions from road transport in Oxford.

Natural Habitats

21. The scheme's potential impacts on the Oxford Meadows SAC (Special Areas of Conservation) has been assessed. No impacts requiring mitigation have been identified.