Online shopping sales have been growing strongly in both relative and absolute terms in the UK over the last 15 years. This growth rate has accelerated substantially during the Covid-19 epidemic as a result of the temporary and permanent closure of many physical shops, together with consumers' concerns about catching the virus if shopping in store. In December 2020, online shopping accounted for 31% of all retail spending in the UK, compared with 21% in December 2019. The growth in the retail penetration rate of online shopping during the Covid-19 epidemic is equivalent at least the total growth rate over the preceding five years. Online shopping is now commonplace in various sectors in the UK including grocery and non-food shopping, and ready-to-eat meals.

As well as affecting retail channels and physical shops, online shopping also causes disruption in shopping-related transport, with growing numbers of last-mile deliveries to residential addresses by vans, cars, lorries, mopeds, bicycles and cargo cycles and the emergence of networks of lockers banks and collection points from which consumers can opt to pick up their online orders.

Online shopping offers the potential to reduce total motorised shopping travel and its related greenhouse gas emissions and local air pollution. Personal shopping travel has been falling in absolute and relative terms over the last 15 years, some of which is due to increases in online shopping (between 2004 and 2019 the average annual shopping trips and shopping distance travelled per person in England fell by 19% and 23%, respectively).

Ideally, from an environmental sustainability perspective, online shopping is supported by well-loaded, locally-based, last-mile delivery vehicles and well-located collection options close to public transport facilities and within walking distances of residential homes. This allows online shopping to completely replace car trips previously made by consumers to the shops with clean, efficient last-mile deliveries, as well as greater use of public transport, cycling and walking by consumers to collect their orders. However, in 2019 the car remained as dominant in personal shopping travel as it had been 15 years earlier (accounting for 65% of personal shopping trips and 85% of personal shopping distance travelled per person in England).

Last-mile deliveries of online shopping orders are not currently as well organised and efficiently operated as they could be from a commercial, transport or greenhouse gas emissions perspective. Achieving the maximum potential environmental benefits from the transport activity associated with online shopping requires that the various stakeholders involved, including consumers, retailers, last-mile delivery operators, and policy makers ensure that their strategies and behaviours match those required in respect of delivery planning and operations, vehicle selection, delivery service levels offered, and personal ordering and travel behaviour.

Online shopping can also result in other important environmental and social impacts in terms of packaging use and waste, international freight transport including air freight, computing and building energy use, social inclusion and exclusion issues depending on consumers' online access and their ability to use it, the safety and wellbeing of last-mile delivery personnel including their working status and conditions, and the behaviours of these delivery personnel that can potentially result in road safety issues, noise disturbance and other nuisances for residents.

The Centre for Sustainable Road Freight (SRF) has carried out an evidence-based review of online shopping and last-mile deliveries and, from this, has produced advice and guidance for stakeholders. The following resources are available:

- A summary report providing general insight for all stakeholders into online shopping and last-mile deliveries, together with summary reports focusing on three sectors: grocery, non-food parcels, and ready-to-eat meals.
- Single page advice sheets for consumers, online retailers, delivery operators, and policy makers listing the actions they can take to reduce environmental and other negative impacts.
- A longer report providing more detailed coverage of online shopping and last-mile deliveries in key sectors, the challenges faced, transport implications, wider supply chain issues, and potential actions, together with attribution of all the reference material consulted in the course of the work.