

design is suitable for road function, and issues such as the amount of through traffic and bus routes – are taken into consideration.

The shared use of highway space has the potential to cause conflicts between different users where there is limited space, for example at crossing points. We will design schemes to reduce these conflicts - as far as possible – and to protect the most vulnerable road users.

Such measures will, over time, change the look and feel of our local centres, encouraging people to make more short trips on foot or by cycle, rather than by car. Roads will be recognised as central to creating more attractive local places, rather than being viewed as just transport links that allow the rapid movement of high volumes of vehicles. Severance created by road traffic will also be reduced and the environment for local residents, businesses and their customers will be significantly improved.

Future role of the car

Greater Manchester’s population is expected to reach 3 million by 2030. We need to plan for this population growth to ensure that it is not accompanied by a similar level of car use, which could cause worsening congestion, road safety, air quality and carbon emissions.

Over the coming years, Greater Manchester will invest in, and expand, its electric vehicle charging network to support the transition to electric vehicles. Work has been undertaken to guide the future expansion of a GM electric vehicle charging infrastructure network to support the promotion of sustainable travel, re-purpose existing public sector assets and avoid the risks with on-street charging, while also providing low cost charging and reduce maintenance costs. As part of Greater Manchester’s emerging Electric Vehicle Charging Infrastructure Strategy, we have set out some principles that are well aligned with those set out in this 2040 Strategy.



Even with a rapid move towards electric and low emission vehicles however, unconstrained growth in car use will not be an efficient use of our limited highways and will continue to cause congestion and conflict with vulnerable road users. We must therefore design our urban areas around the needs of people and not traffic, and therefore think differently about the long-term role of our critical highways networks.

At the same time as our population is growing, attitudes to owning and using a car are also evolving. Many younger people no longer see car ownership, or indeed a driving licence, as essential. Growing, ageing and more affluent populations will also choose different ways to travel. The growth of car clubs, the advent of app-enabled taxi despatch companies, and the use of social media to arrange shared transport can provide transport on demand without the costs and responsibilities of car ownership and will help to shift attitudes over time. This provides a great opportunity to develop a more integrated and flexible transport system which responds to the changing needs of Greater Manchester's residents and businesses.

Technological innovations in vehicle design will also change the way we use and operate our roads by 2040. Smart vehicles equipped with technology that supplements the driver's actions with autonomous safety features are already available. These can detect safety hazards and obstructions, maintain lane discipline and vehicle spacing, and override the driver's control in certain situations such as when a possible collision is detected. There is potential to apply this technology to public transport. Companies are developing further stages of this technology that will take us towards fully autonomous vehicles connected to each other and to highway infrastructure, although this is some way off being proven in all road situations and there remain significant social, technological, legal and policy issues to resolve before it could be implemented. We also need to be extremely cautious about the risks associated with fully autonomous vehicles, particularly if it results in higher levels of car ownership and use, as they may make modal shift much more challenging.

By 2040, the widespread use of even semi-autonomous vehicles could significantly change the way in which we travel and the impacts of road transport. If deployed carefully and based on long-term strategic objectives they have the potential to reduce road casualties, to make better use of limited road capacity, to smooth traffic flows, and to cut journey times and energy use. Such benefits will only be achieved through partnership working between the public and private sector to ensure that vehicle technology development delivers Greater Manchester's wider objectives.

Policy 16: We will work with partners to support a rapid transition towards low emission vehicles in Greater Manchester, including developing a clear strategy on the Electric Vehicle Charging Infrastructure network required to provide greater confidence to residents and businesses to invest in electric vehicles.

Vehicle connectivity could be a significant future source of travel data enabling us to better manage demand and plan future needs. The technology will also support changes to models of vehicle ownership and has the potential to extend access to opportunities for the young, the elderly and those with mobility difficulties. As the technology develops, it is also likely to bring significant changes to bus operations and to the freight and logistics sectors, improving levels of service and reducing costs. We will work with partners to realise these benefits, which may be