+++ Removing Cars from Housing

++ Low carbon living

The mass use of motor cars is incompatible with the low carbon living that is necessary to save the planet from the climate catastrophe:

> "In the long term, widespread personal vehicle ownership does not seem compatible with significant decarbonisation".
> The House of Commons Science and Technology Committee

New housing must be car free.

++ Inequality

Car free housing will be very much cheaper because the rich and affluent will not want live where they can't park a car. Reduced housing costs will reduce inequality as the young and the poor will pay much less rent or buy much cheaper car free housing.

The Automobile Association says "A car is likely to be one of the most expensive things you'll ever have to pay for." Relieving young and poor of the need to own a car also reduces inequality. Even in wealthy areas the young are "fuelling decline in car ownership across Britain as they turn to bicycles and electric scooters instead".

++ Pollution, danger and space

By creating car free neighbourhoods, towns and cities can liberate very large areas filled with the local air-bourne pollution and the threat of injury caused by car movements. The amount of space required to support cars in towns and cities is often underestimated:

> The problem is that of designing an environment for people, who occupy a square metre and need a few square metres to move, which can also accommodate a large number of motor cars, which occupy tens of square metres and need hundreds of square metres to move.
> Evidence to the York Inner Ring Road Inquiry, 1972 (Converted to metric)

++ Effects on spatial planning

Providing space for cars to move has another effect on local planning layouts: The tracks they travel on must be connected pathways. This leads to spaghetti like design as with the Radburn layouts that were popular with planners in the 1970s. These try to separate car traffic from pedestrian traffic. However, according to The Academy of Urbanism:

> Like many influential schemes (Corbusier's Unité d'Habitation springs immediately to mind) the original Radburn works beautifully and yet has inspired countless imitators that have been a disaster.
> Urban Idiocy: Brilliant ideas that ruined our cities

++ Changes can be difficult

Once a neighbourhood has been designed for and inhabited by motorists, change is difficult.

In the US, where is easy to own a gun, the rate of gun homicide is over a hundred times more than in the UK, where it is hard to own a gun. In Japan where it is almost impossible to own one, there is almost no gun crime. (See How Japan has almost eradicated gun crime.)

According to a recent Gallup poll, 63% in the US are dissatisfied with the current gun control laws. See Dissatisfaction With U.S. Gun Laws Hits New High. However, strict gun control in the US is unlikely to happen anytime soon because of political lobbying. Most commentators cite lobbying by the National Rifle Association, which represents commercial interests in gun sales - but once people have guns, it is difficult to take them away "I'll give you my gun when you pry it from my cold, dead hands".

Changing societies is difficult - even when the benefits of a change have public support. Removing cars from those that already have them will be difficult. (See *Appendix: Changing complex systems*.)

++ Resistance to reducing car use

In the early 1970s, I was a delegate to the Labour Party General Management Committee in York. At one meeting I was advocating restricting car parking in residential areas of York. I remember the leader of the Council, Alderman Burke, saying "You can't tell a man in a terrace house that he can't own a car." He was, of course, right. Restricting the right to own a car - and park it outside your house - would have been an electoral disaster. Since then car ownership has soared so the terraced streets of York are now full of parked cars.

In this area (OA E00067456) only half the households have cars
See map for the area from the Office of National Statistics

++ Changes caused by increased car use

Other things have also changed: Many local shops have gone. For the motorist, having your car parked outside your house is a boon. You can travel around more easily - no need for buses: You can shop at out-of-town shopping centres surrounded by car parking. For those without cars the harder access to shops makes life more difficult. In many areas of York less than half of households have a car so more than half the population has the disadvantage of fewer local facilities will little benefit.

Local facilities disappear as the cars move in.

++ Fifteen minute City

The is currently much interest in the idea of a fifteen minute city:

> The **15-minute city** is an urban planning concept in which most daily necessities and services, such as work, shopping, education, healthcare, and leisure can be easily reached by a 15-minute walk or bike ride from any point in the city.
> Fifteen minute city, Wikipedia

Before many corner shops closed, the area shown above was a two minute city - It took at most

two minutes to walk to the local shop.

Matthew Carmona - ten minute city

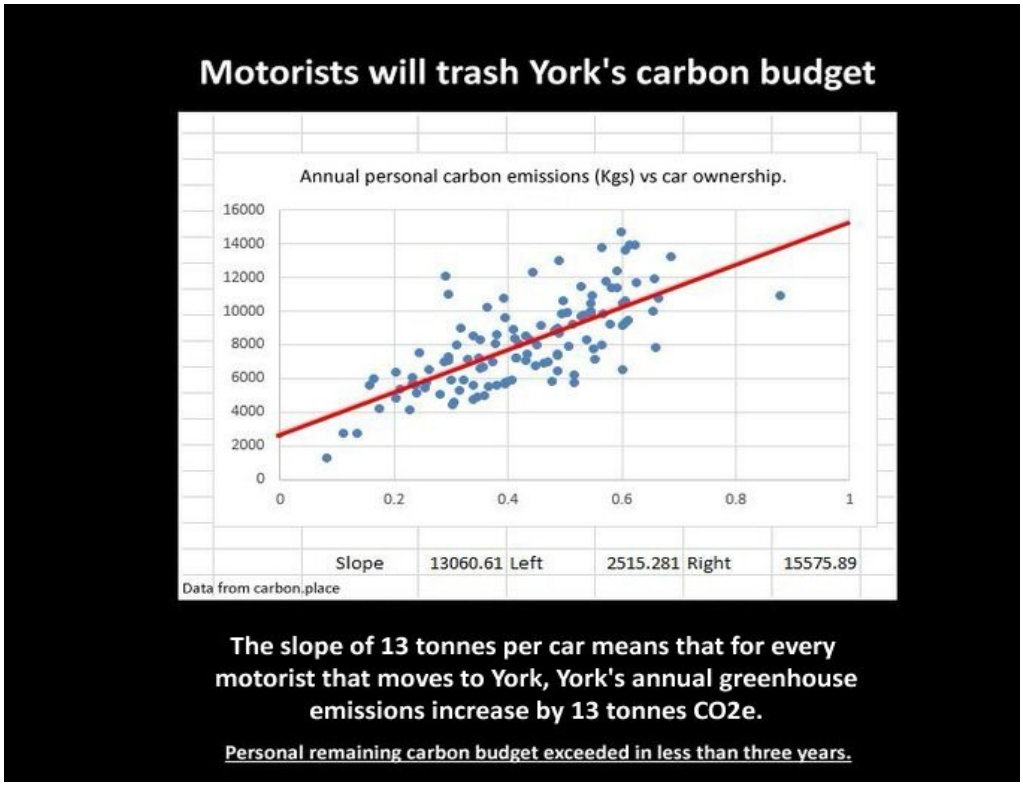
Professor Matthew Carmona recenly conducted a survey on attitudes to housing and neighbourhoods and concluded that residents wanted walkable neighbourhoods that were ten minutes - or less:

> Further support for this five to ten minute experience of urban life was found in the need for local facilities (shops and services) to also be within easy reach of the home and large shops not too far away. Again, satisfaction peaked at five minutes and dropped away markedly over ten minutes. There has been much talk during the crisis about the benefits of 15 or 20 minute cities. This research suggested a ten minute city should be the aspiration.
>
> Home Comforts: Stress Testing Our Homes and Neighbourhoods During the Covid-19 Lockdown

Such neighbourhoods are impossible with mass car ownership.

++ Motorists trash carbon budgets

In areas where car ownership is high the residents have high emissions. Partly because running a car creates emissions, partly because car owners are more affluent and have higher levels of consumption - they fly more; their diets are more carbon intensive and they have bigger homes to heat.



Although cars are not the only source of carbon emissions, private car use causes enough emissions to prevent necessary decarbonisation - as the House of Commons Science and

Technology Committee concluded. On a local scale the data behind the website carbon.place shows that wealthy areas have many more the carbon emissions than poorer areas:

Source of Emissions	"Rich" LSOA 1.7 people/cars	"Poor" LSOA 4.4 people/cars	"Poor" LSOA No cars	"Poor" LSOA. All motorists
	E01013424	E01013399	E01013399	E01013399
Electricity	407	344	344	344
Gas	1390	763	763	763
Other Heat	16	11	11	11
Public Transport	48	24	24	24
Car driving	1530	425	0	1864
Van Driving	104	53	53	53
Flights	3380	0	0	0
Food and Drink	2390	543	543	543
Consumables	1210	278	278	278
Leisure	2230	599	599	599
Other Housing	648	224	224	224
Services	1330	875	875	875
Total	14683	4140	3815	5579
Source	carbon.place	carbon.place	carbon.place	carbon.place with car emissions reallocated from non motorists
% emissions from cars	16.30%	10.30%	0.00%	33.00%

Emissions are in kilograms CO2e per year

Emissions due to cars in the "poor" area are caused by a small number of residents who have cars.

If the area is divided into motorists and non-motorists and the cars' emissions are allocated solely to motorists, a picture emerges as shown in the third column above. For the motorists in the poor area 33% of their emissions are caused by their car use. At 1864 Kgs of CO2e per year, car use emissions alone would take nearly all of a personal remaining carbon budget for a 1.5°C rise in temperature before 2050. The budget is 64 tonnes CO2e. (See *Appendix, Climate is worse than they say*.)

The UK government tackles the problem of private car emissions by placing their bets on electric cars. But electric cars still have huge problems for the climate: The electricity needed to power electric cars is not yet free from greenhouse emissions and won't be over the next few crucial decades. More stubbornly the manufacture of electric cars creates more greenhouse emissions than cars powered by fossil fuels. Making a battery creates large greenhouse emissions.

According to the [**Swedish Environmental Research Agency**], each kWh of batteries

> produced would generate the equivalent of 150 to 200 kilograms of CO2, a figure based on the world's predominantly fossil fuel energy mix (50 to 70% of electricity produced). According to this estimate, the production of a 30 kWh battery would generate around 5 tonnes of CO2, while that of a Tesla would exceed 17 tonnes.
> What is the environmental impact of a battery?

There is also problems with the large amount of metals and other minerals needed to be acquired. Mark Mills warns that it is impossible for mining of copper and other minerals to be increased quickly enough to satisfy potential demand.

> As the International Energy Agency (IEA) documented, energy transition plans will require a 700% to 4,000% increase in the global production of minerals such as rare nickel, copper, cobalt, lithium, and rare earths.
> The 'energy transition' is not visible in the data, Mark Mills, Offshore Magazine

Perhaps such barriers can be overcome. For instance, in the case copper shortage, aluminium can be used - but this needs more complex engineering - and therefore cost. Cost is a higher barrier to the poor compared to the rich. (In any case, most of the poor don't own cars.)

> I love electric vehicles – and was an early adopter. But increasingly I feel duped.
> Rowan Atkinson, I love electric vehicles ... but

According Atkinson (who has a "lifelong passion for the motorcar"), the problem of electric cars is mainly due to 'lithium-ion batteries', which nearly all electric vehicles use and which are extremely heavy. They use 'many rare earth metals and huge amounts of energy required to make them, and they only last about 10 years.'

++ Political obstacles to removing cars

Saving the climate needs a much reduced level of car ownership but is this politically possible? Business interests in the UK Government and commercially driven lobbyists for the car industry will oppose a reduction. Some car owners will be saying "I'll give up my car when you pry my cold, dead hands from the steering wheel".

++ Cheaper cities without cars - Carlo Ripa di Meana

In the 1920s, the architect Corbusier had plans to demolish much of the centre of Paris, housing people in high rise blocks which would make room for roadways. The trend has been to more roads & more cars, which means more consumption and higher GDP. That's popular with our main political parties.

However, living with less traffic is pleasanter and much cheaper. When he was European Environment Commissioner, Carlo Ripa di Meana commissioned a study which showed the enormous expense of allowing cars in towns. A press release from the European Commission in 1992 said:

> Is it possible, and if so to what extent, to conceive of a city which will operate more efficiently than the type of cities we have at present, using alternative means of transport to the private car?
> The answer provided by the study is positive, even in purely financial terms: the car-free city costs between two and five times less (the costs varying depending on the population density of the city).

That study hastened his exit from the European Commission. The Independent reported:

> Last month, Carlo Ripa di Meana, the EC environment commissioner, unveiled plans to shift cars out of urban areas. It was a question of making the transition from 'the car dream to the dream city – the car- less city' he said. He was even ready to live without his own Alfa Romeo, he added. Sadly, the EC decided it could live without Mr Ripa di Meana, and he is now back home in Rome. The EC environment portfolio is temporarily under the wing of another commissioner – Mr Van Miert.

(See also UK breathes easy after Ripa di Meana's exit, which reported how the UK pressured the Commission to sack Ripa di Meana because it wanted to weaken EU rules on water quality. More sewage in the sea?)

A consequence of reducing the use of cars is that less is spent on consumption. This causes production to fall reducing GDP. CO_2 emissions are reduced because of lower emissions from driving cars and manufacturing them. As discussed in the *Appendix: Jobs productivity and artificial intelligence* this requires changes to our whole economy.

++ The mood changes ... but

In 2023, the mood has changed. Planning authorities, perhaps reacting to public pressure, want to reduce car use, particularly in towns. Cars are being prevented from passing through new Low Traffic Neighbourhoods (LTNs), which are increasing in popularity: For UK,, there are no results for "Low Traffic Neighbourhoods" in Google searches dated before 2000. Before 2010 there were 14 results for every 100 "New roads" results. In the past year there were 91 LTN results for every 100 "New roads" results.

Search term	Results before 2000	Results before 2010	Results in past year
"New roads" UK	375	188	220
"Low traffic neighbourhoods" UK	0	27	140
Ratio "LTNs" to "new roads"	0	0.14	0.49

Increase in Google results "Low traffic neighbourhoods" to "New roads"

LTNs are growing in popularity, because they slow traffic and cut traffic volumes. Their popularity usually overcomes objections from motorists that are inconvenienced. They not only make neighbourhoods quieter with improved air quality but they are reported to cut accidents by half ("Impacts of 2020 Low Traffic Neighbourhoods in London on Road Traffic Injuries").

However, Low Traffic Neighbourhoods rarely have restrictions on residents' car ownership. They are not usually car free neighbourhoods, areas where residents give up the right to own a car.

Some car free housing does exist in the London boroughs of Hackney & Tower Hamlets. The UK Government's planning policy document, The National Planning Policy Framework, does allow for this in special cases - in dense urban areas but in general rules out LTNs:

> Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport.
>
> Promoting sustainable transport, National Planning Policy Framework

Bar occasional exceptions, this bans car free housing - ironic when, the House of Commons Science and Technology committee concluded that mass car ownership is incompatible with saving the climate:

> In the long term, widespread personal vehicle ownership does not seem compatible with significant decarbonisation.
> Decarbonising transport, House of Commons Science and Technology Committee

Under the heading "Promoting sustainable transport", the NPPF is restricting car free, low-carbon lifestyles.

There will be great resistance to preventing people owning cars - as Alderman Burke pointed out in 1971. But now the tide is turning against the effects of mass car use, there is an opportunity that can be grasped. This could provide very much cheaper housing - for the non-motorist.

As noted earlier, there will be reduced demand for car free housing because rich people won't want to buy houses where they can't park their cars. The Greater York Development Corporation must be free of the stipulations in the National Planning Policy Framework and so provide very much cheaper housing because of this reduced demand but also because of the reasons put forward in the Technoser Report commissioned by Carlo Ripa di Meana before he was sacked by the European Commission.

York Council's current plans are to build more housing like Copmanthorpe where the carbon emissions of the residents reach planet destroying proportions. The council should give up its false claim to be aiming for net-zero by 2030.