

22nd May 2019

Housing fit for the future?

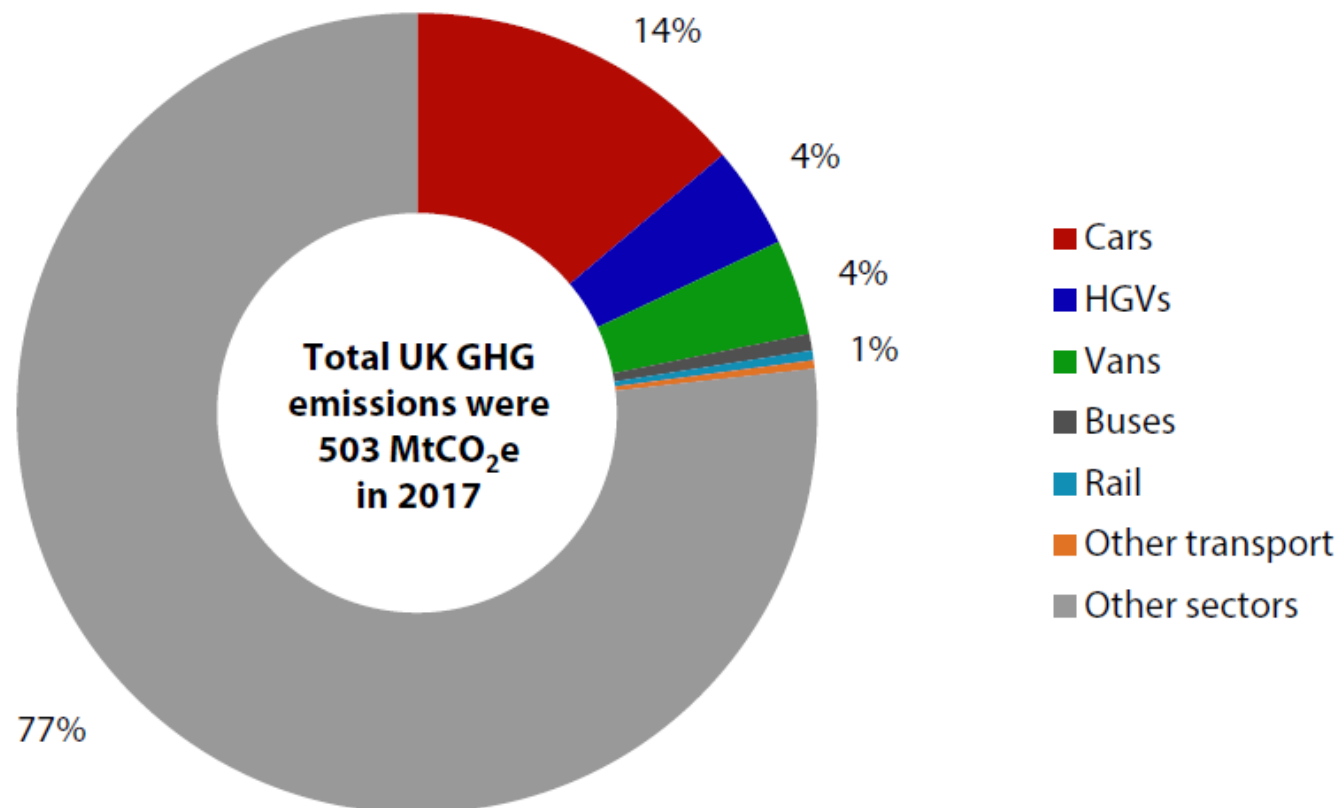
Dr Ellie Davies

Raising UK climate change ambition.

- **The UK should legislate as soon as possible to reach net-zero greenhouse gas emissions by 2050.** The target can be legislated as a 100% reduction in greenhouse gases (GHGs) from 1990 and should cover all sectors of the economy, including international aviation and shipping. The Climate Change Act continues to offer appropriate governance.
- The aim should be to meet the target **through UK domestic effort**, without relying on international carbon units (or 'credits').
- **Now is the right time to set a net zero target.** It is technically possible, based on current consumer behaviours and known technologies, with prudent assumptions over cost reduction.
- **An earlier date should not be set at this stage.** Some sectors could reach net zero earlier, but for most sectors 2050 appears to be the earliest credible date, to give time to develop speculative options as alternatives for any shortfalls. Avoiding the need for early capital scrappage or punitive policies.
- **The target is an appropriate contribution to the Paris Agreement.** The UK can benefit from the international influence of setting a bolder target, using it as an opportunity for further positive international collaboration.
- **Wales should set a target for a 95% reduction in emissions by 2050 relative to 1990.** Wales has less opportunity for CO₂ storage and relatively high agricultural emissions that are hard to reduce. On current understanding it could not credibly reach net-zero GHGs by 2050.
- **Scotland should aim for net-zero greenhouse gas emissions by 2045.** Scotland has proportionately greater potential for emissions removal than the UK overall and can credibly adopt a more ambitious target. Interim targets should be set for Scottish emissions reductions (relative to 1990) of 70% by 2030 and 90% by 2040.

Greenhouse gas emissions today.....

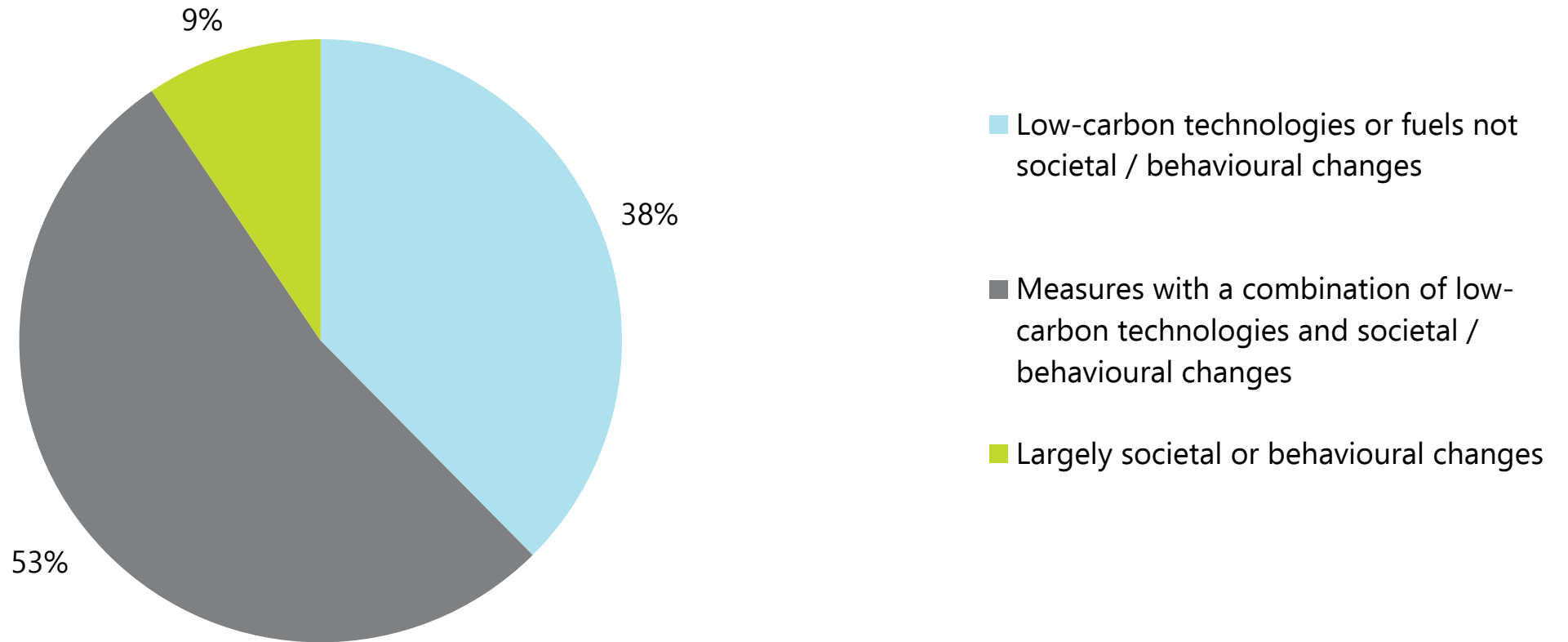
Transport (road and rail) was the largest greenhouse gas emitting sector in the UK in 2017 and 2018. Cars make up the largest % of road transport emissions.



Reaching net-zero emissions in the UK

Scenarios to reduce UK emissions to net-zero

Role of societal and behavioural changes in the Further Ambition scenario



Source: CCC analysis

The role of sustainable transport.

Assume that 10% of car mileage can be shifted to walking, cycling and public transport.
Corresponds to ~35% of trips.

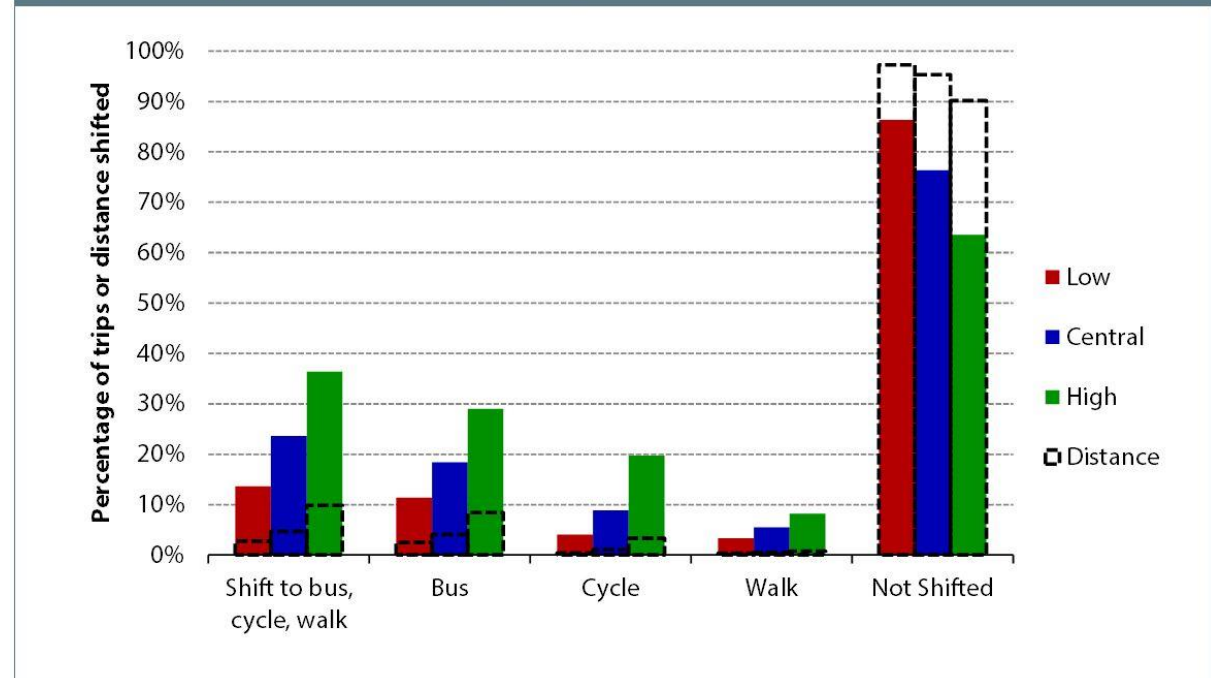
Required policy measures:

- A national strategy to address decline in bus usage.
- Increased roll-out of bus rapid transit, trams and light rail.
- Land use planned around sustainable transport options.

Potential policy options:

- Wider availability of shared electric bikes, electric scooters and e-cargo bikes.
- New mobility services such as on-demand electric taxi buses.

Figure B5.7: Opportunities to shift car journeys to low or no carbon alternatives



Housing – Fit for the future?

Location, location, location...

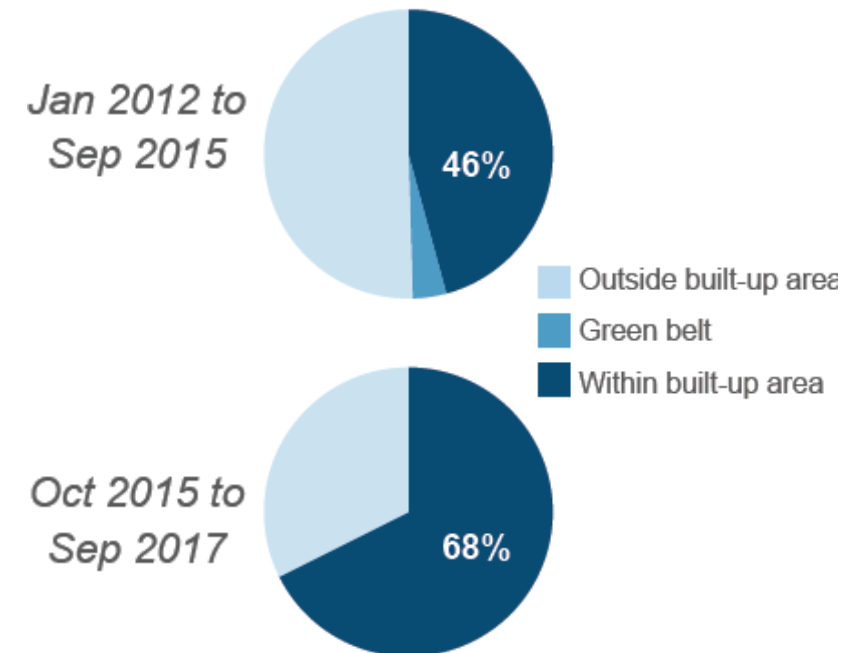
Whilst achieving sustainable development is a goal of the National Planning Policy Framework:

- Pressures to deliver affordable housing have led to requirements on local authorities to maintain a five-year support of potential land to build houses on and an emphasis on economic viability of these houses
- Both of which have led to a focus on quantity of housing rather than quality.

Where possible, housing should be located within existing urban areas, providing easy access to amenities, reducing the need to travel.

The RTPI analysed locations of permissions granted for over 220,000 new homes in 12 English fast growing city regions.

Are housing permissions located within the built-up area?



To facilitate walking and cycling, new houses should be linked to towns by suburban streets, rather than busy link roads.

DfT has set a target to double cycling trips by 2025 (from 2013 levels) in the Cycling and Walking investment Strategy.

New developments should be planned to support this aim.

- Cycle paths should be segregated to help people feel safe.
- Connecting roads should have pavements.
- Walking routes should not be along dual carriageways, across large roundabouts, through underpasses or by streams and hedge-lines as these do not feel safe.
- New developments can benefit from a grid-like layout, ensuring walkers and cyclists can travel easily, but reducing routes cars can use by careful placement of plants, gates and bollards.



Recommendation: The Government should review the powers of planners and develop mechanisms to fund costs of building high quality walking, cycling and public transport infrastructure, even when outside the immediate housing site boundary.

Housing – Fit for the future?

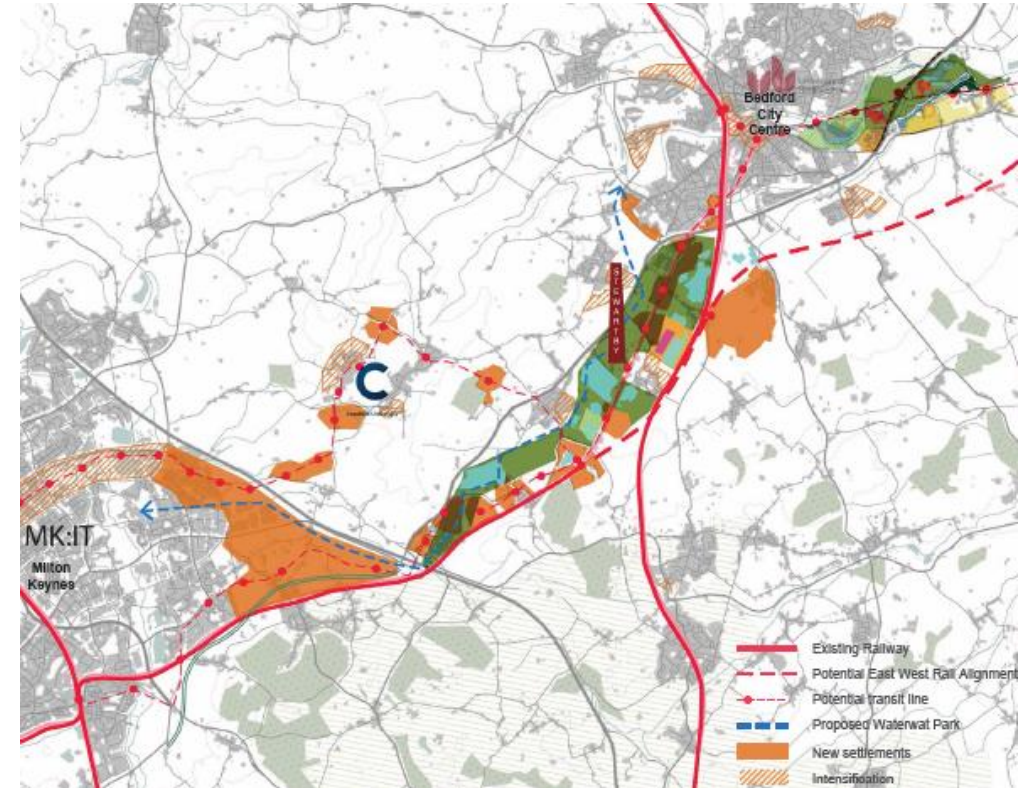
Public transport

- Public transport services are most cost effective when they can serve a number of residential areas along their routes.
- The bus industry should be consulted as plans are being drawn up.
- A series of linked small settlements can be located between destinations.
- Developments must be serviced by public transport from the day people begin to move in.

Recommendation: MHCLG and DfT should explore potential for new high-capacity public transport options to unlock areas for housing development.

Recommendation: Local authorities should consult the bus industry at the Local Plan stage to ensure new housing areas can be serviced by commercially viable routes.

Where located near high capacity, frequent public transport such as rail, light rail, trams or bus rapid transit, housing should be higher density, to make best use of the infrastructure



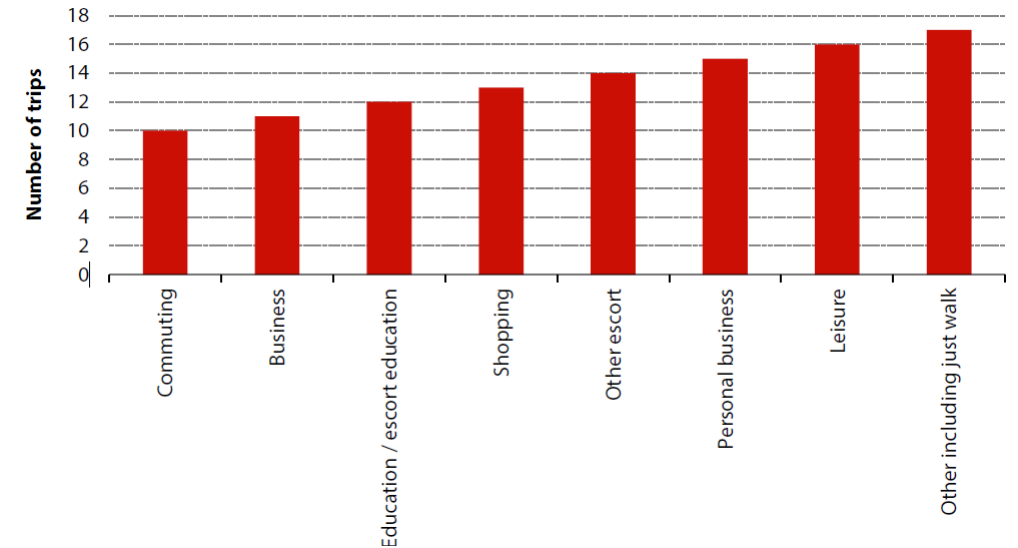
Example of potential public transport options from 5th Studio for the National Infrastructure Commission Oxford-Cambridge Arc report

Housing – Fit for the future?

Minimising the need to travel

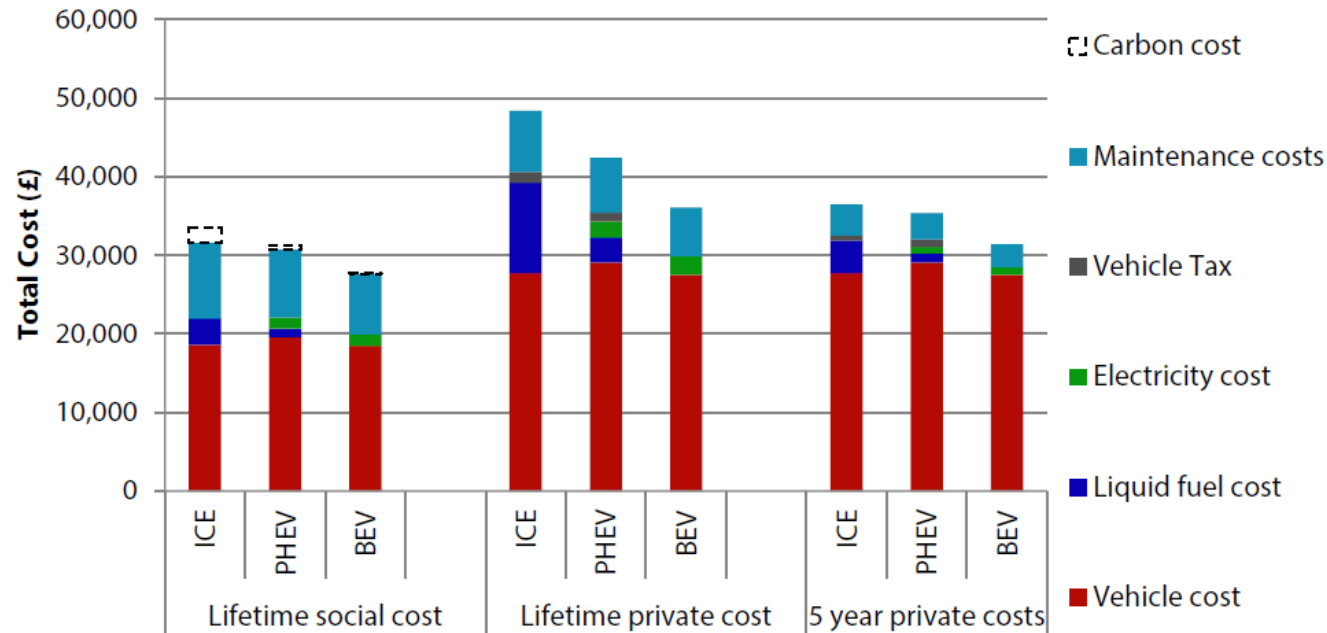
If it is not possible to locate new housing developments near existing amenities, providing new schools, doctor's surgeries, shops and businesses within new developments can minimise the need for new residents to travel.

- Places of work, retail and community provision should all be integrated within walking distances within the residential area.
- Local shops, schools and restaurants can generate a community feel.
- Even people who would not previously choose to walk have been found to change their behaviour when moving homes with a wide variety of destinations within walking distance.



Average number of trips per person per year
in England (2017)

100% of new car sales should be electric vehicles by 2035 at the latest.
New homes should either have charge points installed or have accessible cabling to ensure easy installation at a later date.



Costs of purchasing and running an electric car in 2030 according to CCC projections.

Towns and cities must set out a vision for the future of travel demand in their urban centres. Innovative policies are required to deter people from driving into busy city centres where there are more sustainable alternatives.

Nottingham – Introduced a workplace parking levy to fund public transport improvements

Madrid– Plans to ban cars from 500 acres in the city centre.

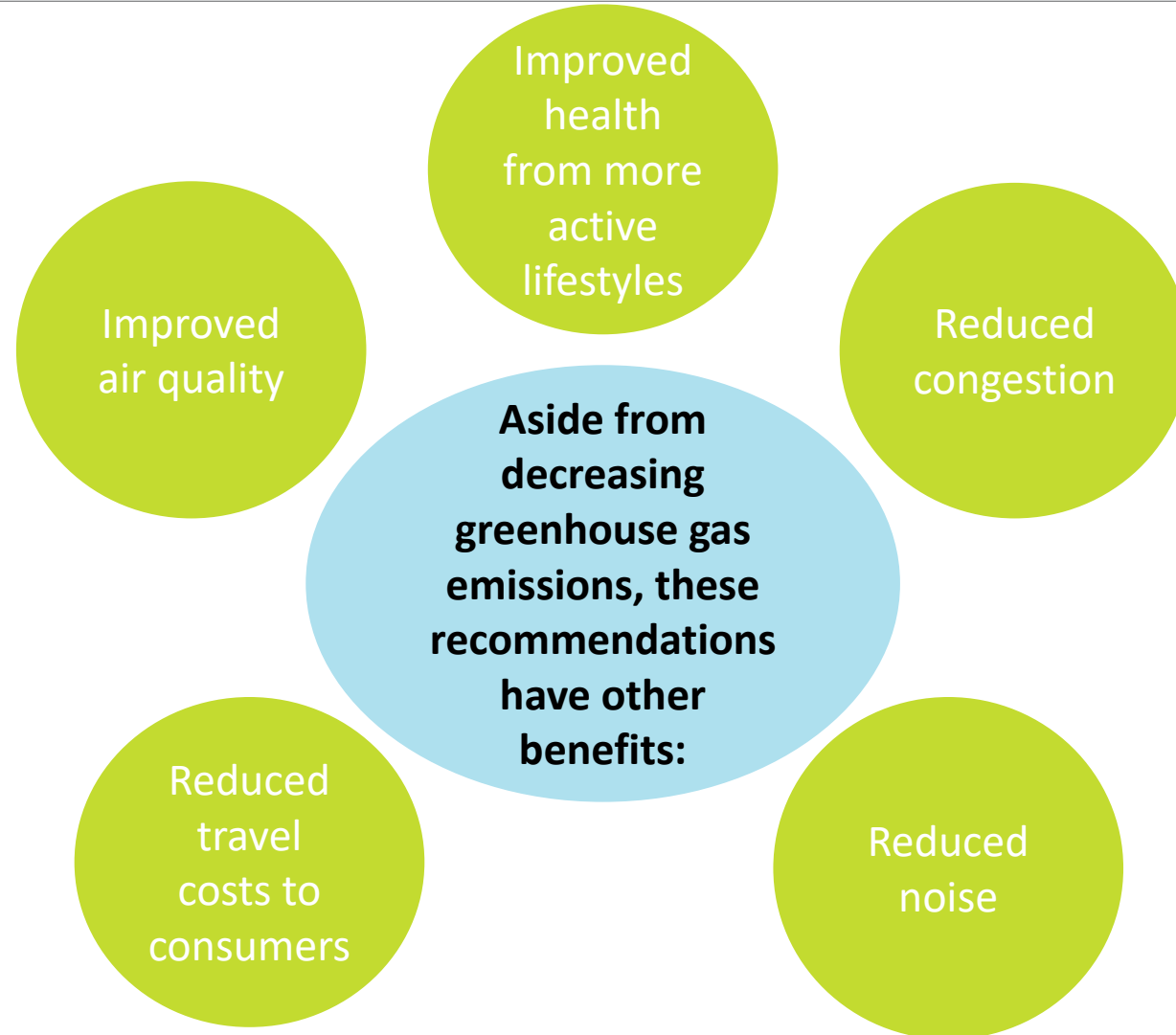
Amsterdam – Cars running on petrol and diesel will be banned from driving in Amsterdam from 2030.



Amsterdam – 1971
Amsterdam Archives



Same Street Amsterdam -2013
Thomas Schlipper



Any questions?



Feel free to contact me on: Ellie.Davies@theccc.org.uk