

Low Emission Transport

A Strategy for Cleaner, Greener Transportation Fuels in Cardiff

INTRODUCTION:

Air Quality in Cardiff

Cardiff has been identified as one of a number of cities in the UK with deficient air quality standards. In some cases, these standards breach legal limits, and it is estimated that around 40,000 premature deaths per year in the UK can be attributed to poor air quality.

There are multiple causes for this, but the most significant contributor in the city is nitrogen dioxide emissions from diesel and other fossil-fuelled vehicles.

The Low Emissions Transport Strategy has been developed to show the Council's commitment to tackling this significant public health issue. It forms part of our broader Clean Air Strategy and sits alongside our developing strategic Transport plans.

The Low Emission Transport strategy sets out seven key areas for action, each of which is intended to stimulate and support a transition away from fossil fuels for transportation.

Why we need to act

The Council's influence on Transportation in the city is considerable. We set land-use and transportation policy, run a sizeable fleet of small and large vehicles, and purchase goods and services in considerable volumes, all of which have some transport implication for their delivery. We also have close relationships with other major transport players in the city, including Cardiff Bus, the local Taxi Community, Higher Education establishments and the Local Health Board.

Traffic management and carbon reduction have been key aims across this wide range of influence, but the recent spotlight on Air Quality issues in the city has underlined that there is more to do.

In particular, there is a perceived demand/supply standoff in the low emission fuels sector that needs to be unlocked. New vehicle electric and other clean fuel technologies are constantly emerging but there is still a lack of supporting re-fuelling/re-charging infrastructure in the city to give consumers access to, and confidence in these new technologies. This in turn keeps prices high.

As a major deliverer, purchaser and specifier of transport services the Council is in a position to show strategic leadership in this area. By acting as an "intelligent customer" and early adopter of low emission transport technologies, the Council could provide a boost to market confidence in the wider community as well as starting to put in place some of the supporting infrastructure needed to allow other consumers to opt for low emission transport more easily.

Not only would this help to kick start improvements to the City's air quality, but these actions could also make a significant contribution to the city's carbon reduction targets, and also further boost the City's competitive position, helping to present Cardiff as a city at the forefront of transportation technology, offering a cleaner, healthier and smarter quality of life.

Strategic Vision

This strategy has been based on a series of background studies and discussions with major stakeholders and leaders in the field of low emission transport. This has helped to identify key opportunities for the Council to grasp.

Many of these are direct actions addressing the delivery of routine services, but it is also clear that the Council has a wider leadership role that could help to stimulate change in the city and region. The strategic vision is therefore to position the Council as a “catalyst for change”, proactively addressing city wide Air Quality challenges. The areas of particular focus are on:



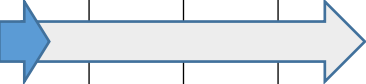


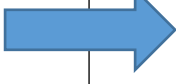


- Facilitating and speeding up a pathway to zero emission transport,
- Using our procurement power to instigate change and provide broader market confidence,
- Engaging with and supporting local innovation, and
- working with partners to secure the best Circular Economies for the City and for Wales

Seven specific areas for action to support this vision are identified in the pages that follow.

1 – Fleet Procurement





An action plan for the introduction of low emission vehicles into the Council’s fleet is set out in the table below. For smaller vehicles, including pool cars and light vans a strategy to introduce light vehicles will be pursued. For larger fleet vehicles, where electric power is more difficult, the initial aim will be to seek partnerships with innovative technology developers to first pilot and then start to specify alternative fuels such as Hydrogen.

There will be a need to install refuelling and recharging facilities alongside the changing fleet and the strategy will seek to make these facilities available for public use where possible.

Fleet Procurement Actions	18/19	19/20	20/21	21/22	22-25
I. Specifying an appropriate number of electric vehicles in the Council’s light fleet at the earliest opportunity.					
II. An assessment of a proposed target to have 100% zero emission vehicles in the light fleet by 2022,					
III. A review to steer our next pool car procurement to include zero emission vehicles,					
IV. A plan for the installation of necessary recharging facilities at key Council sites, and					
V. The inclusion of an “innovation” requirement in our heavy fleet procurement to encourage the piloting and testing of new technologies as they emerge, and with clear longer term targets to adopt these where possible.					

2 - Electric Vehicle Charging Infrastructure

There is currently a shortage of electric vehicle charging infrastructure in Cardiff. The table below sets out a strategy to maximise access to current government grants to start to address this shortage. The actions have been developed with reference to a detailed study that helped the Council to assess the issues and opportunities.



Charging Infrastructure Actions	18/19	19/20	20/21	21/22	22-25
I. Submit a fully evidenced bid to Central and/or Welsh Government in Summer 2018 for grant funding for an initial tranche off facilities.					
II. A consideration of what legal and governance structures would be needed to publicly “trade” on-street energy supply.					
III. Develop a detailed strategy against which to measure and direct the growing number of private sector providers showing interest in providing similar infrastructure in order to ensure maximum benefit to the City.					

3- The Council's Energy Supply Role

Any significant step-change in demand for electric and other low emission vehicles will inevitably raise questions about where the energy needed to power them will come from.

The Council has potential to be able to supply some of this energy from its emerging renewable energy generating assets, and to encourage others in the city to do so where appropriate.





If positioned appropriately this could bring cost benefits both for the fuelling of our fleet and to the return on investment in renewable energy schemes.

Energy Supply Actions	18/19	19/20	20/21	21/22	22-25
I. Consider options for vehicle recharging in the business cases for our existing and proposed renewables projects, and					
II. Continue to engage with the academic and innovation sectors to explore future opportunities and identify best practice as technologies develop.					

4 - Council Procurement Strategies


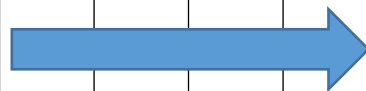

The Council purchases a very wide range of products and services in carrying out its duties and functions, and almost all of our procurement actions trigger some sort of motorised transportation need. Although difficult to quantify, the carbon and air quality impacts associated to from this are likely to be =considerable. It is clear, therefore, that Council leadership to encourage, and eventually specify, a transition to low emission transport in our supply chains could have very significant positive effects for the city.

We know that change of this nature will take some time, and that suppliers will need to understand and be comfortable with the implications for their own businesses. However, evidence from our studies suggests that, with the appropriate infrastructure in place, there could be some quick wins for both the Council and our suppliers, and that as infrastructure and vehicle technologies develop and expand there is scope to drive further positive change.

Procurement Actions	18/19	19/20	20/21	21/22	22-25
I. Begin awareness raising of the Council's low emission requirements and wider benefits with suppliers and contractors,					
II. Assess and secure quick-win opportunities with willing suppliers,					
III. Encourage suppliers and contractors to make a commitment to reduce emissions as part tender process for suitable contracts, and					
IV. Build specific low emission requirements into relevant contracts where deemed appropriate and likely to deliver measureable improvement.					

5 - Influencing Local Partners




The Council is keen to put Low Emission Transportation on the agenda in our on-going partner relationships and discussions to ensure that we can share learning and best practice and identify useful synergies and opportunities to increase the overall impact of our collective actions.

Influencing Actions	18/19	19/20	20/21	21/22	22-25
I. Work through the Local Service Board to ensure that tackling air quality becomes a collective action in Cardiff, sharing best practice and learning, and aligning our strategies and actions where appropriate,					
II. Work with Cardiff Bus to understand their current investment approach, and together identify more ambitious future opportunities, linked projects and potential funding sources for alternative fuel buses,					
III. Work with the local Taxi Community to share the best practice examples achieved in other cities and to support willing operators to understand and deliver potential new business models, and to develop a targeted plan for change.					

6 - City Growth

Cardiff is a fast growing city. Our planning and transport policies are already tackling issues relating to congestion and aim to encourage more sustainable active travel choices.

Alongside this however, there is a need to ensure that new developments provide the necessary infrastructure to allow our growing population to access the widest range of sustainable travel choices. The Council's Planning service will develop a series of policy and advisory documents to set out the Council's expectations for how new developments can support a transition to low emission transport.

City Growth Actions	18/19	19/20	20/21	21/22	22-25
I. Approve Supplementary Planning Guidance on "Managing Transportation Impacts" in April 18					
II. Prepare a formal paper to consider how best to address low emission transport through planning policy or other most appropriate route.					
II. Develop a best practice document to engage with major developers in the city to set out the Council's expectations and to encourage best practice in new development.					

7 – Supporting Innovation

Many of the technologies in the low emission transportation sector are well established and mature and, as outlined in the Strategy, there are many opportunities ready to be taken. However, it also clear that continued research and development will be needed to support some of the more challenging areas.

In particular, there is a need for more cost effective solutions for very heavy vehicles where battery technologies can't yet provide sufficient power. Alternative fuels such as hydrogen and biofuels are showing considerable promise in this area but more work is needed to bring these to the mass market.

The Council has a strong history of engaging with the academic and innovation communities around energy. In this process we've secured National and International grants to partner with research and development organisations to help develop, test and demonstrate new technologies.

There is an opportunity to continue to this approach to innovation as part of our longer-term commitment to supporting a transition to low emission transport.

Supporting Innovation Actions	18/19	19/20	20/21	21/22	22-25
I. Establish opportunities to test and specify new vehicles and vehicle enhancements,					
II. Seek opportunities to engage with and support local sources of Hydrogen and other bio-gas fuels,					
III. Begin testing and demonstrating new business models for local electricity generation and distribution for vehicle recharging,					
IV. Explore opportunities for "Vehicle-to-Grid" projects based on our charging infrastructure roll-out.					

Conclusion and Recommendations

The Low Emission Transport Strategy sets out the Council's vision and actions to begin a transition away from polluting fossil fuels for transport. It is based on independently researched evidence of best practice and success elsewhere, and offers a low cost but high impact strategy to improve our own performance. It also has the potential to influence and enable others in the city to make positive changes.

Target dates and details for each of the key actions are set out in the action plan attached to this report, and this will be supported by a communications campaign to promote and share the strategy more widely.

Each individual action area is linked, however, and there are particular dependencies between them. Most significantly, it is essential that charging and refuelling infrastructure in the city grows in order to support and facilitate the uptake of low emission vehicles. One of the priorities for us, therefore, will be to bid for government grant funding support for an initial roll out of electric vehicle charging points in the city.