

## RECOMENDATIONS

The recommendations for this report are set out in this section of the document. They based on seven separate areas that the task group believe should be the basis for the development of Cardiff's Clean Air Strategy. The seven areas are set out below:

- Public Health;
- Clean Air Strategy – The Next Steps;
- Planning;
- Transport;
- Sustainable Fuels;
- Council & Public Sector Partner Responsibilities;
- Consultation & Engagement.

The recommendations are based on the evidence received during the task & finish exercise and the key findings that are documented on pages 31 to 156 of this report.

### Public Health Recommendation

- **Recommendation 1** – It is clear that poor air quality is a significant health issue and that it has a negative impact on people living in Cardiff and across the wider region. It is estimated that it contributes to approximately 40,000 premature deaths in the United Kingdom every year and that some doctors believe that this is just the tip of the iceberg. Given the scale of the problem the task group recommends that improving public health should be documented as the primary reason for introducing a Clean Air Strategy in Cardiff. Ultimately nothing should be more important to the Council and its partners than improving public health.

## Clean Air Strategy – The Next Steps

- **Recommendation 2** - During the task & finish exercise it became apparent that achieving the EU air quality standards by 2022 was virtually impossible by using and / or accelerating existing practice, for example, by improving sustainable transport infrastructure and driving widespread public behaviour change. Not one of the many witnesses we asked was confident that the EU air quality target would be achieved in the short timescale available by carrying on with or accelerating the current approach. It was also clear in the evidence sessions that reaching the challenging target ‘in the shortest time possible’ would almost certainly involve the creation of some kind of clean air zone or low emission zone. That said, working out what is best for Cardiff in terms of air quality is an evidence based scientific exercise that will be delivered in the form of a feasibility study. Such a study will review a range of alternative options for achieving the air quality standards and assess which is most likely to achieve the change needed ‘in the shortest time possible’. There are many different ‘Clean Air Zone’ options and variations, for example, congestion charging zones, low emission zones and low emission neighbourhoods. These are further complicated by geographical boundaries, emission levels, vehicle types, financial implications and time / date restrictions. Working out the best option to take is a significant challenge that will require time, expertise, clear guidance and financial resources - unfortunately based on the evidence provided Cardiff appears to be short on all four. With all of this in mind the task group recommends that the Council:
  - Continues to work with and lobby the Welsh Government for a clear direction and guidance on the next steps to take in terms of achieving air quality compliance ‘in the shortest time possible’;
  - Ask the Welsh Government to provide financial assistance to undertake the feasibility study and to deliver the option identified to

improve air quality in the feasibility study;

- Employ suitably qualified experts to deliver the feasibility study and help implement the option identified in the feasibility study to improve air quality;
  - Consider, evaluate and scrutinise the advice before taking a final decision as to the way forward;
  - Waste no further time in carrying out the feasibility study – the EU air quality limits need to be addressed by either 2022 or in the soonest time possible. The evidence presented suggests that feasibility studies take about two years to deliver and at the point of writing this report the Council had not started its feasibility study for Cardiff.
- **Recommendation 3** - All evidence presented to the task group identified nitrogen dioxide produced by motor vehicles to be the single biggest air quality pollutant in Cardiff - with diesel vehicles being the major offender in this category. As we are ultimately looking to reduce air pollution in the city the task group recommends that the new clean air strategy cites the reduction of nitrogen dioxide from diesel vehicles as one of its key aims, and that whenever possible actions resulting from the clean air strategy specifically reflect this aim.
  - **Recommendation 4** - The task group believe that Cardiff on its own cannot fully address the air pollution issues facing the city. As has been explained in the report nitrogen dioxide is Cardiff's largest pollutant and privately owned cars, particularly diesel, predominantly produce this. It is estimated that there are 81,800 commuter journeys into Cardiff each day from neighbouring local authorities and this volume of traffic undoubtedly has a negative impact on air quality. The two sections of road that when modelled breach EU emission limits and mandate that action is taken are located on two of the main commuter routes into the city. In addition to this Cardiff is the main commercial hub for the South East Wales region, this means that a significant number of public transport journeys occur from neighbouring local authorities into the city. Understanding this

relationship means that we have to work with our neighbours to address the air quality problem, therefore, the task group recommends that we consult and work with neighbouring local authorities to develop the Clean Air Strategy and supporting action plan to improve air quality. It is important to remember that air pollution from motor vehicles does not start at the city boundaries and so any regional transport initiatives that encourage modal shift into Cardiff should in some way feature in any evolving air quality improvement action plan.

- **Recommendation 5** - It was noted during the task and finish exercise that the introduction of clean air zones, congestion charging zones and low emission zones tended to have a dramatic impact in increasing modal shift, for example, the London congestion charging scheme increased bus patronage by 14% in a very short period of time. Cardiff has in recent years worked hard to increase modal split and has the proud ambition of achieving a 50:50 modal split by 2026. Should the feasibility study recommend some type of clean air zone, congestion charging zone, or low emission zone as the way forward the Council should not be afraid to implement the decision as it will ultimately help achieve its biggest existing transportation target.
- **Recommendation 6** - A low emission neighbourhood is an area-based scheme that includes a package of measures delivered within a specific area and is focused on reducing emissions and promoting sustainable living locally. Such schemes have been implemented in five areas across London and have focused on locations with high pollution. They aim to reduce pollution levels through local measures and reducing the number of local journeys undertaken. Key to their success is the partnership and involvement of the local community, businesses and the local authority to jointly identify and deliver a common set of goals. Relevant projects could include working with major landowners to improve emissions from buildings; better management and reduction of freight movement and service vehicles entering the area, for example, the consolidation of deliveries and use of shared supplier scheme; the implementation of

emissions based on street parking charges and the introduction of electric vehicle charging infrastructure. The task group recommends that the Council look into the feasibility of creating a low emission neighbourhood in an area of Cardiff with the worst air pollution levels. It could act as a pilot for trialling air quality improvement initiatives and would be a first of its kind for Wales.

- **Recommendation 7** - Evidence provided and research gathered for the task & finish exercise clearly indicated that the cities that made the biggest improvements in terms of air quality also made the largest investment in terms of resources for dealing with the problem. In addition to this, the cities that have been the most successful in reducing air pollution received significant support from central government – both financial and policy guidance terms. For example, three of the top twelve performing European cities in terms of reducing air pollution were in Germany. Germany is also responsible for 55 of the 225 European low emission zones - in contrast the United Kingdom has only created two low emission zones. On this basis the task group recommends that the Council continues to lobby the Welsh Government for clear direction and financial support, and that it invests as much money and effort as possible to drive air quality improvements across the city.

## Planning Recommendations

- **Recommendation 8** - Cardiff has a well-established planning system that is able to assess, consider and deal with any air quality issues that might arise through the planning process. The Shared Regulatory Service is able to act as a consultee on any specific air quality planning matters and other public sector bodies such as Natural Resources Wales can provide specialist expertise on the topic should a complex case arise. However, the numerous factors that impact on our relationship with air quality standards is constantly changing, and means that we continually need to review our planning process to ensure that they keep pace with changing demands. For example, Newport City Council has recently created supplementary planning guidance for dealing with air quality issues, while other local authorities have developed supplementary planning guidance for dealing with emerging issues such as sustainable fuel infrastructure. As a result the task group recommends that the Planning Service reviews its existing supplementary planning guidance in relation to managing air quality and implementing sustainable fuel infrastructure alongside the development of the Clean Air Strategy. If the Planning Service identifies any significant gaps in statutory planning guidance provision then an appropriate document(s) should be commissioned to ensure that such matters are properly addressed.
- **Recommendation 9** - When assessing planning applications the wider knock on effect on air quality should always be thoroughly considered. For example, the creation of a new housing development might accidentally create a traffic driven pollution problem several miles away that had not been properly considered by the planning process. The task group acknowledges that such assessments are sometimes carried out and that the introduction of the development master planning process has helped, however, this isn't always the case and sometimes the wider local implications are not considered. With this in mind the task group recommends a review into the wider traffic and pollution implications of

new developments. This should include a review of traffic modelling techniques and how planning obligation monies can be applied across a wider area to deal with the impact of traffic and pollution.

- **Recommendation 10** - In a world of shrinking financial resources it is important for the Council to take advantage of any additional expert support currently available. During the inquiry the Members were told that the Health Protection division of Public Health Wales and Natural Resources Wales were available to offer free expert advice on technical and complex air quality issues. The task group recommends that the Planning Service takes advantage of these expert resources as and when required.

## Transport Recommendations

### ➤ General

- **Recommendation 11** – There was broad agreement that the Council's travel plans for Cardiff were sound and if delivered would have a positive impact in terms of driving modal shift and improving air quality in the city. In addition to this it was acknowledged by several witnesses that we don't currently have the necessary infrastructure to ensure that we meet the EU air quality targets, and that the Metro proposals wouldn't be delivered within 'the soonest time possible'. One notable witness stressed that now was the time to deliver against the plans as we have moved from the position of 'predict & provide' to 'provide & promote'. On this basis the task group recommends that the Council notes the urgency of required change to meet air quality targets and does all that it can to deliver and then promote its existing transport proposals.
- **Recommendation 12** - Delivering the long-term infrastructure that is required to grow sustainable travel and drive modal shift is very important. The Council needs to be involved in helping to bring the large pieces of infrastructure to Cardiff and the wider South East Wales Region, for example, by playing its part in the development of schemes like the Metro. However, it is quite often the case that the Council is just a partner in such schemes and that ultimately it is reliant on the purse strings of other organisations (such as the Welsh Government) to ensure that large infrastructure schemes are delivered. At the same time it is important to remember that the Council has a number of short-term initiatives for influencing travel behaviour that are within its control. For example, the introduction of 20 mph zones; increasing residential parking schemes to 75%; working with and educating the public, local businesses and schools, etc.. The small changes that the Council is able to make can have a huge difference to influencing public behaviour and driving modal shift. On this basis the task group recommends that the Council should increase its



focus on the affordable short-term measures within its control.

- **Recommendation 13** – There are a number of existing and potential traffic / parking control measures that the Council is able to employ to help control the use of the public highway. For example, the Council currently delivers civil parking enforcement and moving traffic offences across the city and in theory could introduce a range of other charging schemes including congestion charging, low emission zones and a work place parking levy. All of these schemes are capable of generating significant levels of income that could be used to underpin the delivery of transport infrastructure improvements. With this in mind the task group recommends that monies raised from existing or proposed traffic / parking control measures is reinvested directly back into transport infrastructure. This would create a virtuous circle where driver penalties are reinvested to provide clean and sustainable long-term travel alternatives.
- **Recommendation 14** – During the task & finish exercise Members were informed that the Council is due to publish ‘Cardiff’s Transport & Clean Air Green Paper’ in the spring of 2018. The Environmental Scrutiny Committee would welcome the opportunity to scrutinise this document once it becomes available.

#### ➤ **Public Transport Infrastructure**

- **Recommendation 15** - Several witnesses stressed the importance of completing the Cardiff Central Transport Interchange and the positive impact that it will have on increasing the use of public transport. It is felt that the facility will act as the heart of the regional transport network and, therefore, help drive modal shift. The task group agrees with this and urges the Council to work with developers to complete this facility ‘in the soonest time possible’. As an interim measure the Council should republish and distribute the map that was made available when the old bus station was first closed; this will provide a vital navigation tool for new / infrequent users of public transport and visitors to the city.

## ➤ **Active Travel (Cycling & Walking)**

- **Recommendation 16** – The task group agrees with the Public Health position around accelerating the improvement of infrastructure to support active travel (cycling & walking). Based on the evidence received during the inquiry the task group recommends that:
  - The Council continues with improvements and ongoing development of dedicated walking and cycling infrastructure, for example, by accelerating the development of segregated cycle lanes in Cardiff;
  - The Council continues to improve access to local green spaces by active travel, for example, improving walking and cycling access in Cardiff's parks;
  - The Council actively promotes and encourages the use of its recently introduced 'NEXTBIKE' cycle hire scheme. Members felt that such schemes provide a positive message in terms of sustainable travel and encourage behaviour change;
  - The Council continues with its roll out of 20 mph schemes in the city. Members felt that 20 mph schemes support the growth of active travel (cycling and walking) by reducing average vehicle speed. This in turn creates a safer travel environment and so encourages people to undertake more cycling and walking journeys. Quite a few of the witnesses to the inquiry were very supportive of the continued roll out of 20 mph zones.
- **Recommendation 17** - The Council, public sector partners, major employers and For Cardiff (the Cardiff BID) should do all it can to encourage their staff to use active travel to get to work and carry out day to day trips whenever possible. The Council should work with these groups to create a strategy to drive this change and identify practical incentives that can be directed at staff to encourage modal shift. Suggestions could include the expansion of flexible working; increasing

the option of home working; travel discounts for using park & ride facilities; involving major employers in the planning of car free days; issuing support and direction to employers to provide and fund bike stands; providing information on cycle lanes and safe cycle routes; selling the health and well-being benefits of active travel.

## ➤ **Parking**

### **Recommendation 18**

Car parking is an important factor in managing travel behaviour. Cheap plentiful parking encourages car journeys into an area, while placing physical restrictions and financial barriers on parking supply encourages a positive modal shift. As stated in many parts of this report, reducing car journeys into and out of Cardiff is key to meeting air quality targets. It is also, in part, something that the Council has control over and so is able to change. With this in mind the task group recommends that the Council should:

- Consider gradual increases in public car parking charges in city centre areas as public transport options are improved. The funding raised by the public parking charges should then be used to pay for and accelerate improvements in active travel facilities and public transport;
- Run a consultation on private parking facilities in the city to identify how much it is used and to understand the impact that it has on businesses, congestion and air quality;
- Consider what the Council can do to manage the large amount of private parking in Cardiff, for example, a review of the planning process around car park development to encourage modal shift;
- Review the option of introducing a workplace parking levy to Cardiff. Nottingham has successfully introduced a workplace parking levy which has increased modal shift and raised significant funds (£44 million) for transport initiatives in the city;

- Consider variable parking charges to correspond with traffic parking demand when next reviewing the parking charges within the Parking Revenue Account;
- Develop further methods to encourage 'For Cardiff (Cardiff BID)' members and their staff to use the park & ride facilities offered by the Council - if successful this would help reduce traffic movements into the city.

➤ **Taxis**

- **Recommendation 19** – As a part of the task & finish exercise Members met with representatives from the taxi industry to discuss the air quality challenges facing taxi drivers and companies in the city. It was clear during discussion that there is an understanding of the future challenges facing the industry, for example, some companies have already taken steps to address the problem by procuring low emission vehicles. However, the ongoing Welsh Government Taxi Consultation and a lack of financial assistance for the taxi industry in Wales has created uncertainty and stalled vehicle investment decisions. Other issues discussed during the meeting included existing taxi licensing policy; emissions levels and the use of bus lanes. Based on the evidence gathered, discussion at the meeting and the key findings the task group recommends that:

- The Council makes a clear statement that sets out the Council's ambitions for taxi emission standards in the city and explains out how this might be achieved, for example, Nottingham has stated that it wants to significantly reduce taxi emissions in the city by converting all of its taxi fleet to electric by 2025;
- The Council needs to work with Cardiff's taxi companies and drivers to establish and implement a reasonable timescale to set a minimum emissions standard for taxis operating in the city, with the new minimum emissions standard being built into the existing licensing policy. To support this change the Council should work with the taxi companies and drivers to identify potential financial assistance to

deliver the change, for example, an approach could be made to Welsh Government asking for support – such transitional support has been provided in cities like Dundee, Derby and Birmingham;

- Taking the Welsh Government Taxi Consultation into consideration the Council should review the use of the ‘Exceptional Conditions Policy’ and wider ‘Taxi Licensing Policy’ to make sure that it is fit for purpose and complies with the aim of improving air quality in the city;
- The Council needs to work closely with the taxi companies and drivers to ensure that parking or blocking of bus lanes stops. It should be made clear that enforcement action will be taken by the Council against any drivers who block the bus lanes. The task group recommends that any driver found blocking a bus lane should be fined and ultimately have the privilege removed if they persist in doing it. In return for this support the Council should acknowledge that the number of Hackney Carriage licences greatly exceeds the number of taxi rank spaces and carries out a review of taxi rank facilities in the city centre. It would be appreciated that any response to this recommendation is supported by a series of proposed actions and agreed timescales as this matter has been raised at previous scrutiny meetings during the last twelve months.

### ➤ **Buses**

- **Recommendation 20** – As a part of the task & finish exercise Members met with a number of bus company and passenger group representatives. It was clear from discussion that they understood that overall bus emission levels needed to fall to help improve air quality, however, to achieve this substantial and ongoing financial assistance would be required from the public purse. Several references were made to the lack of Welsh Government funding to support bus services in Wales; this was in contrast to the support offered other parts of the United Kingdom and indeed to the rail network. Other issues discussed during the meeting included emission

levels in the city centre; bus company business planning and investment in future vehicles; the introduction of low emission buses; park & ride and bus lane infrastructure and a single ticketing approach. Based on the evidence gathered, discussion at the meeting and the key findings the task group recommends that:

- The City Centre Air Quality Management Area (predominantly based around Westgate Street) has the highest levels of nitrogen dioxide concentrations in Cardiff - this is significantly impacted by approximately 140 bus movements per hour. It is estimated that buses account for 56% of the nitrogen dioxide emissions and that 63% of the bus movements in the Westgate Street area are from vehicles that are Euro 4 or less. To provide some context the Euro 5 standard was established on the 1<sup>st</sup> September 2009; this means that over half of the bus movements in Cardiff's worst polluted street are from vehicles that are approaching ten years of age or more. This local air pollution problem is compounded by the canyon nature of the street. Members of the task group believe that air quality improvements are urgently required in this very busy area and recommend that the Council should work with local bus companies to explore the feasibility of restricting older buses from the area. Options that should be considered might include the creation of a 'greener bus route' or developing a low emission zone in the area that might exclude buses that fail to meet a specified emissions standard, for example, Euro 6. The Members of the task group acknowledge the challenges that this might present to local bus companies, however, such restrictions have been applied in other parts of the country and have dramatically reduced nitrogen dioxide emissions.
- Bus companies should be asked to work with the Council and provide a business plan to illustrate how they plan to reduce bus emissions for bus journeys in the Cardiff in the next three years. This would correspond with the timescale for achieving compliance with the EU air quality limits and help provide focus on the role that they have in

helping to achieve this target.

- In terms of financial support to reduce bus emissions it is clear that Welsh bus companies are a poor relation when compared to their Scottish and English counterparts. Government funding has been put in place in other parts of the United Kingdom to help support the transition to cleaner buses, while the Welsh Government in comparison has provided very little. The Council should support the local bus companies by lobbying the Welsh Government for financial assistance for bus services in Cardiff and Wales.
- There are no low emission buses operating in Cardiff or indeed Wales. The Council should do what it can to bring a low emission bus to the Capital City, for example, supporting a major bus provider to procure and introduce one or more hydrogen buses would be a very positive step forward.
- The Council should continue with its development and promotion of Park & Ride and bus lane infrastructure across the city. These are essential in driving modal shift and will be a key ingredient in supporting the wider Metro effort. Effective bus lanes help reduce journey time and improve punctuality – this in turn breeds confidence and convenience into the system, important for delivering modal shift. To compound this park & ride journeys should be punctual, quick and direct. Members were aware of park & ride journeys that made multiple stops between the park & ride facility and city centre – this adds time and makes the park & ride journey less attractive compared to using the private car, on this basis the Committee recommends that all park & ride journeys should be direct, i.e. not feature additional stops.
- Bus and train services in Cardiff should work towards a single ticketing approach in the South East Wales Region. Introducing this in line with the new Metro developments would appear to be a good opportunity and the functionality of the ticket should be similar to that of the London

Oyster Card.

- The Council should work with local bus companies and consider the potential option of introducing bus mounted transponders onto buses using bus lanes to enter and exit the city. In doing this feedback should be sought from the Swansea bus lane transponder scheme where they are used to send a signal to traffic lights before the bus actually arrives at the light. The signal changes the traffic light in favour of the bus to allow it to proceed smoothly without having to wait as standing traffic. This makes the bus journey quicker and ultimately more reliable – two important characteristics in helping to increase bus patronage.

➤ **Other**

- **Recommendation 21** - In recent years Cardiff has promoted itself as a cruise liner destination and has managed to attract some interest from visiting cruise liners. The task group was told that when a cruise liner visits a port it emits the equivalent amount of particulate matter as approximately of 100,000 vehicles entering the city – this is greater than the average number of commuter vehicles entering the city on a typical day. While the task group acknowledges the economic benefit created by cruise liners it is also concerned at the level of particulate emissions that they produce and the impact that these emissions might have on public health. With this in mind the committee feels that when the Council is assessing the economic benefits of allowing cruise liners to dock it should also factor the environmental impact that they might create into the overall assessment.



## Sustainable Fuel Recommendations

### ➤ The Wider Picture

- **Recommendation 22** - Recent market trends clearly illustrate that that low emission vehicles are the future of motoring – this is a very positive thing as the technology is much cleaner than traditional crude oil based fuels. The growth of sustainable fuels such as electric and hydrogen will result in air quality improvements, but will not necessarily reduce congestion. This future direction of travel means that Cardiff and Wales cannot afford to be left behind; therefore, the Council and its other public sector partners must do everything they can to embrace and support the change. With this in mind the task group recommends that:
  - The Council continues with the development of its Sustainable Fuel Strategy and supporting list of short, medium and long-term action plans. Clearly documenting the actions that the Council is planning to take is a positive step forward;
  - The Council works with and lobbies Welsh Government to create a sustainable fuel strategy for all of Wales. This is something that countries like Scotland have done and it would send a clear message of intent to all Welsh local authorities, public sector bodies, businesses and the wider public;
  - The Council engages with other local authorities in the South East Wales region to encourage them to create and publish sustainable fuel strategies. When developing the strategies they should be encouraged to publish short, medium and long-term actions that align with those established for Cardiff. It is important to reiterate that air pollution doesn't just start at Cardiff's boundaries and so a regional approach is required;
  - The Council engages with its public sector partners across the South East Wales Region to encourage them to create and publish

sustainable fuel strategies. When developing the strategies they should be encouraged to publish short, medium and long-term actions that align with those established for Cardiff. The Cardiff Public Services Board would seem to be a good place to table the debate on improving air quality and developing suitable sustainable fuel strategies across the public sector;

- The Council should encourage neighbouring local authorities and other public sector partners to issue positive proposals on how and when they intend switching existing fleet to sustainable fuel options. In addition to this, they should also be encouraged to build the use of sustainable fuels (such as electric and hydrogen) into their procurement processes for vehicles and the wider supply chain;
  - Cardiff has very little in the way of sustainable fuel infrastructure. Without the necessary charging and refuelling infrastructure it is very difficult to increase the use of electric and hydrogen fuelled vehicles in Cardiff and across the wider area. The Council needs to work with neighbouring local authorities, public sector partners and local businesses to identify what they can do to grow sustainable fuel infrastructure across the South East Wales Region. Welsh Government, neighbouring local authorities, public sector partners and major businesses should be asked to provide information on the sustainable infrastructure that they currently have and intend to provide or support. This information should then be collated to create a 'South East Wales Region Sustainable Fuel Infrastructure Map' that would then be published and circulated to various stakeholder groups to raise awareness of the options available.
- **Recommendation 23** –The task group recommends that the Council should work with local car dealerships to encourage the growth of electric, hybrid or hydrogen vehicle sales. In particular the following information should be clearly communicated:
    - That there is an urgent and legal need to improve air quality in the city

- this in part can be addressed through the increased use of electric, hybrid or hydrogen vehicles;
    - Details of existing and proposed sustainable fuelling infrastructure in the South East Wales Region;
    - The benefits to their customers for owning new electric, hybrid or hydrogen vehicles;
    - Details of any financial assistance available for the purchase of new electric, hybrid or hydrogen vehicles.
  - **Recommendation 24** – The Council should work with the motor industry to bring a trade show for electric, hybrid or hydrogen vehicles to Cardiff. To achieve this it should approach an established industry body or motor trade show provider (for example, the Society of Motor Manufacturers & Traders or Green Fleet Urban) and invite them to deliver an event aimed at the motor vehicle industry in Wales. Such an event would help to stimulate further interest in electric, hybrid and hydrogen vehicles and hopefully increase local take up of the vehicles.
- **Electric (EV)**
- **Recommendation 25** - Cardiff has no on street electric vehicle-charging infrastructure. Some private companies such as IKEA and ASDA have charging points at their sites but the offer is very limited. This means that electric vehicle charging opportunities are very limited in the city, making it difficult for people to refuel electric or hybrid vehicles. Cities like Manchester, Leeds and Bristol are pushing ahead in creating public on street charging infrastructure and it would be a shame for Cardiff to be left behind. The Council has recently commissioned a report that aims to identify the best way forward for electric charging infrastructure in the city. It aims to explore different charging methods; the challenges of installing on street charging; the various implementation options and the potential economic opportunities being presented to the Council and private sector.

It is important that we understand all of these factors before taking the next step. With this in mind the task group recommends that the Council considers and evaluates the content of the report before deciding on how to roll out electric charging infrastructure to the city. That said the need to make progress is immediate and so the Council should ensure that there are no unnecessary delays in the decision making process for taking this forward. Once a clear picture has been identified then it is essential that the Council does what it can to accelerate the delivery of this much needed infrastructure.

- **Recommendation 26** – The Council currently has only one electric vehicle. From the evidence provided it is clear that electric vehicles are a part of the solution in terms of improving air quality, therefore, we need to procure more of these vehicles. With this in mind the task group recommends that the Council builds the use of sustainable fuels (such as electric & hydrogen) into the vehicle and wider supply chain procurement process to support the growth of low emission fuels. If suppliers and contractors are keen to win our business then they should support our objective of improving air quality by using cleaner vehicles;

### ➤ **Hydrogen**

- **Recommendation 27** - Cardiff has no hydrogen-fuelling infrastructure; the closest refuelling site being found a few miles north of the city in Treforest. In total there are only three hydrogen-refuelling stations in all of Wales. The lack of convenient and accessible hydrogen refuelling infrastructure has been identified as the single biggest barrier to owning and running a hydrogen vehicle in Cardiff; without more infrastructure the market for hydrogen vehicles will simply not grow. The slow take up of hydrogen-fuelled vehicles seems to be a shame for a number of reasons, these include:
  - Producing hydrogen fuel is a relatively simple chemical process that

can be achieved anywhere;

- Water is the only emission produced by hydrogen fuelled cars;
- Refuelling a hydrogen car is a relatively quick process which can take anywhere between one and five minutes – this is comparable to refuelling to a petrol or diesel car and significantly quicker than charging an electric vehicle;
- The drive range on a tank of hydrogen is comparable to most petrol or diesel cars;
- South Wales has significant expertise in the production of hydrogen fuel;
- The hydrogen fuel cell was invented by a Welshman called Sir William Grove in 1839. It seems a shame to have invented the technology in Wales and then to have fallen behind the rest of the world in rolling out its use in motor vehicles;
- South Wales could play a significant role in supporting the supply chain for the production of hydrogen vehicles in the United Kingdom.

With all of this in mind the task group recommends that the Council needs to review and then do what it can to bring at least one hydrogen refuelling facility to Cardiff. Potential options include supporting a major fuel supplier to install a facility or developing a Council / public sector facility to fuel Council or other public sector vehicles. In particular, the Members of the task group would like to see a hydrogen bus and waste truck being introduced to the streets of Cardiff – the introduction of public sector hydrogen vehicles could act as a catalyst to underwrite the development of new refuelling infrastructure. Members understand that hydrogen vehicles are approximately twice the cost of similar petrol or diesel vehicles and so financial support would be required to make the purchase a reality. Contacting the Welsh Government for financial assistance for such a purchase would be a good starting point.

## **Council & Public Sector Partner Responsibilities - Recommendations**

- **Recommendation 28** – Improving air quality in Cardiff is an issue that affects everyone in the city. This means that a united public sector response is required and so it is vital that the Council and other major public sector partners assume a leadership role in driving this agenda forward. On this basis the task group recommends that the Council works with its public sector partners to:
  - Agree and work towards setting clear and meaningful targets for air quality improvement;
  - Implement air quality strategies and that detail time focused action plans to help achieve air quality compliance;
  - Communicate and educate the public on air quality issues;
  - Monitoring the progress achieved.
  
- **Recommendation 29** – The Council and all major public sector organisations should run a programme to encourage their staff to switch to active travel and encourage workplace practices to reduce the number of unnecessary journeys. For example, increasing work from home opportunities where practical; creating partnerships and discounted travel offers with public transport providers; increasing use of conference calls; emphasising the benefits of sustainable travel and implementing flexible start times.

## Consultation & Engagement Recommendations

- **Recommendation 30** – Once the Clean Air Strategy is complete and a clear direction of travel is established the task group recommends that the Council should do all it can to raise the profile of what is being done to improve air quality in Cardiff and explain why it is being done. This should involve a huge communications, consultation and engagement exercise that targets neighbouring local authorities, public sector organisations, major employers and the public. The aims and ambitions of the strategy should be highlighted; specific actions should be detailed and an explanation on the potential benefits provided. As with most change there will be negative feedback, however, evidence suggests that in the medium to long term the popularity of any significant proposals will increase.
- **Recommendation 31** – The Council should support an interactive consultation event during the feasibility study period with its public sector partners and Members of the business community to explain the air quality challenges facing Cardiff. This event should include a brainstorming session with the group to explore practical steps that Cardiff's employers could take to help improve air quality in the city. It would seem sensible to work with For Cardiff (Cardiff BID) to deliver this event as they are in direct contact with most of the employers in the city centre. A business community representative who took part in the inquiry felt that drawing on the collective experience and knowledge of the business community might identify ideas that public sector partners might not have considered. For example, drawing on his wider experience he explained that some cities in the United Kingdom had worked with businesses to introduce a voluntary ban on private workplace deliveries which it is estimated account for approximately 40% of private deliveries in a typical city centre.