West Midlands Low Emissions Towns & Cities Programme

Low Emissions
Towns and Cities

Good Practice Air Quality Procurement Guidance

Final
September 2014

This guidance forms part of the development of an overarching Low Emission Strategy for the West Midlands, aimed at helping regional local authorities in achieving the UK Air Quality Objectives and EU Air Quality Limit Values.

The production of this guidance has been co-ordinated by Coventry City Council with technical support from Andrew Whittles, Low Emission Strategies Ltd. Acknowledgement is also given to Sustainability West Midlands for their assistance in preparing this document.

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Executive Summary

This guidance has been produced as part of the Defra funded Low Emission Towns & Cities Programme (LETCP). Coventry City Council is the lead authority for this work stream. The LETCP seeks to promote joint working to reduce road transport emissions, including Oxides of Nitrogen (NO_x) and fine particulates (PM_{10} & $PM_{2.5}$), whilst simultaneously seeking reductions in greenhouse gases and noise emissions. Building on policies and measures to discourage vehicle use and encourage the shift to sustainable transport modes, the LETCP also targets emission improvements of the vehicle fleet through the accelerated take-up of cleaner fuels and technologies.

The purpose of this guidance is to outline public sector procurement policies that can influence a reduction in road transport emissions[1], highlighting current good practice within the West Midlands. This guidance is aimed at procurement officers, fleet category managers and environmental practitioners, promoting a greater understanding of the inter-relationships between disciplines, resulting in further integrated activity and the design/delivery of co-ordinated and optimised policies and measures.

Definition of Sustainable Procurement:

"A process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society and the economy, whilst minimising damage to the environment"

Levels of Nitrogen Dioxide (NO_2) in 6 of the 7 West Midland Council areas are in breach of the health-based EU Air Quality Directive Limit Value[2] as is the case in a majority of major conurbations in Europe, the main cause being associated with road transport emissions. The EU has instigated legal proceedings against the UK and devolved administrations for infraction under the Localism Act[3] allowing for any fines imposed in England to be passed on to relevant local authorities.

Road transport emissions are also a major source of particulate matter (PM_{10} and $PM_{2.5}$), reductions of which are known to significantly reduce mortality and morbidity in exposed populations[4]. The World Health Organisation (WHO) recently published evidence to show that exposure to diesel exhaust fumes can increase the risk of lung cancer in key sector workers by 40%[5].

Road transport accounts for between one-fifth and a quarter of all greenhouse gas emissions in the West Midlands and is also a significant source of elevated noise levels.

Building on low emission strategy policies and measures detailed in several West Midland Authorities Air Quality Action Plans and the 3rd Local Transport Plan[6], the LETCP involves all Authorities - working in partnership with Centro - in developing and delivering a Low Emission Strategy (LES) capable where practicable of reducing road transport emissions from the vehicle fleet that originates, terminates and transits the West Midlands. The LES builds on considerable low emission vehicle activity in the West Midlands, including electric and hybrid electric bus deployment, CABLED[7] – the largest EV, hybrid and Hydrogen vehicle demonstration programme in the UK, and alternative refuelling infrastructure expansion including EV re-charging as part of the Plugged in Places Programme[8].

The LETCP seeks to design, disseminate and deliver key municipal policies and measures that can assist in avoiding vehicle use and enable a shift to sustainable transport modes, whilst also improving the emissions of the vehicle fleet through the accelerated uptake of cleaner fuels and technologies. In looking at key policy areas, including transport and land-use planning, public sector procurement has been identified as having significant potential to influence road transport emissions and this guidance seeks to outline policies and practices within the West Midlands (and wider) which are capable of being implemented by all regional local authorities.

1 UK Sustainable Procurement Task Force https://www.gov.uk/government/publications/procuring-the-future

2 http://ec.europa.eu/environment/air/quality/legislation/directive.htm

3 http://www.legislation.gov.uk/ukpga/2011/20/contents/enacted

4 http://comeap.org.uk/introduction-to-air-pollution/100.html

5 http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

6 http://westmidlandsltp.gov.uk/ltp3vision/

7 http://www.cabled.org.uk/

8 http://www.pluggedinmidlands.co.uk/

This guidance covers the following:

- Background to the development of sustainable procurement policies and their relevance in addressing pollution issues within the West Midlands
- Looking at local sourcing initiatives and their ability to reduce road transport movements
- Integration of environmental performance criteria within public sector supply contracts
- Building on significant low emission vehicle demonstration activity within the region to inform business cases for accelerated deployment
- Legislative requirements for clean and fuel efficient procurement, including development of a West Midlands Whole Life Cost Model, regional low emission vehicle demonstration database and the publication of regional and national buying standards for transport
- Overcoming barriers to providing low emission infrastructure through supporting policies e.g. planning, public private partnerships and innovation
- Low emission vehicle and infrastructure cost reduction through joint procurement initiatives, assisted by economies of scale
- Potential for stimulating regional economic development through low emission technology uptake and supporting activity
- Potential development of Low Emission Fleet Strategies to inform the procurement process

Photo courtesy of Gasrec

Introduction

Photo courtesy of Coventry City Council

1.1 Public sector organisations including government agencies and local authorities share responsibilities to improve air quality and reduce greenhouse gas emissions. The road transport sector is a significant source of emissions of both air quality pollutants and greenhouse gases. The West Midlands area currently breaches the UK Air Quality Objective for Nitrogen Dioxide and could face substantial penalties, passed on through the Localism Act. Unlike most sector emission trends, greenhouse gas emissions from transport are still upwards and risk dominating the EU Carbon Budget over the coming years unless significant corrective action is taken.

1.2 The EU, UK Government and Local Government bodies have identified the significant role that public sector procurement can have in securing environmental improvements, particularly in relation to vehicle emissions and assisting the accelerated transition to a low carbon economy. Appropriate procurement strategies can help stimulate economic development and encourage innovation.

1.3 Whilst sustainable public procurement policies and principles have been developing for several years, the application of these principles to vehicle procurement is not widespread nor clearly understood, thus the full potential for environmental improvement is not yet realised.

1.4 The Low Emission Towns and Cities Programme (LETCP) was established by the seven West Midlands local authorities in 2010/11. Its purpose is to build on Air Quality Action Plan measures and the Third Local Transport Plan and so produce a West Midlands Low Emission Strategy capable of delivering policies and measures that can reduce air pollution, simultaneously reducing greenhouse gas emissions and noise from road transport. As part of the LETCP Low Emission Strategy there are several work streams – development of good practice air quality guidance in using planning and public sector procurement to reduce road transport emissions and a Low Emission Zone Technical Feasibility Study. Coventry City Council is the lead authority for the production of this Procurement Guidance which has been informed by their experiences in trialling and procuring low emission vehicle technologies, along with the other West Midland authorities

1.5 The sections in this guidance outline a variety of mechanisms and legal requirements that can accelerate the uptake of clean and fuel efficient vehicle technologies in the West Midlands. Dissemination of this work to other national authorities is being undertaken.

Social Value, Local Sourcing and Supply Contract Specification

2.1 Public sector procurement is worth 2 trillion Euros across the EU Member States and accounts for 17% of Gross Domestic Produce[9]. The total annual combined spend of the West Midlands authorities of over £5 billion[10] represents enormous purchasing power, capable of influencing supply chain transformation and stimulating local economic development.

2.2 Public sector organisations are required to look at best value, rather than lowest cost, when making procurement decisions. The Public Services (Social Value) Act 2012[11] came into force on the 31st January 2013. For the first time this places a duty on public bodies to consider social value ahead of a procurement. The Act applies to the provision of services, or the provision of services together with the purchase or hire of goods or the carrying out of works. The wording of the Act states that:

The authority must consider:

(a) how what is proposed to be procured might improve the economic, social and environmental well-being of the relevant area; and

(b) how, in conducting the process of procurement, it might act with a view to securing that improvement.

2.3 The Act allows for consultation with stakeholders to better understand social value and improve service specifications. While matters that are relevant and proportionate to procurement should be taken into account, the Act provides scope to include the consideration of vehicle emissions arising from contract delivery and their impact on the health of the community.

2.4 Many West Midland authorities have developed projects to support local suppliers, enabling increased local economic activity and also encouraging a reduction in vehicle miles incurred within the supply network. Projects include Find it in Sandwell[12], Find it in Birmingham[13] and Think Walsall[14]. The Think Walsall programme is outlined below:

2.5 Think Walsall is an initiative run by Walsall Council to support local businesses engaging in the supply chains of development and investment taking place in or around the Borough. Its main objective has been to retain spending in the local economy and to safeguard jobs, though another objective on the Think Walsall Charter is to reduce carbon emissions, road traffic congestion and improve air quality.

The project works through three main activities:

- Networking – virtually and physically
- Facilitating procurement via an online portal www.thinkwalsall.com
- Assisting purchasers at main contractors or in the authority to research and identify potential suppliers/subcontractors

2.6 In 2011/2012 businesses benefiting from Think Walsall intervention created 23 jobs and won work totalling around £320,000. This will have a potential carbon emissions saving as suppliers, subcontractors and employees will be travelling shorter distances on the assumption that without the intervention, work would have gone to businesses outside the Borough, and that companies within Walsall are more likely to employee staff that live within the Borough.

2.7 The project is currently evolving as the original Working Neighbourhoods Fund grant dries up. There is potential for a revised Think Walsall

9 http://ec.europa.eu/environment/gpp/index_en.htm
10 2012/13 budget statements
11 http://www.legislation.gov.uk/ukpga/2012/3/enacted
12 http://www.finditinsandwell.co.uk/
13 http://www.finditinbirmingham.com/
14 http://www.finditinwalsall.co.uk/

project to learn from the initial years and develop new initiatives, such as:

- Assistance for companies to estimate the carbon footprint associated with tenders in order to meet demands from customers and strengthen understanding of the link between local procurement and reduction of carbon emissions
- Promoting the use of www.thinkwalsall.com for all Council purchasing and for other public sector partners
- Developing a trademark to certify a proportion of local production in the supply chain of products or businesses

2.8 In addition to these programmes local authorities can improve road transport emissions through the inclusion of fleet emissions specifications as part of the award criteria for contracts relating to the supply of goods and services. Local companies should be encouraged to develop and implement fleet emission strategies that may give them competitive advantage when tendering for contracts.

2.9 Schemes such as EcoStars[15], run by Barnsley Metropolitan Borough Council, and the Freight Operators Recognition Scheme[16], co-ordinated by Transport for London, can be adopted more widely. These fleet recognition schemes award stars or bronze/silver/gold standards for fleets achieving best practice in issues such as fleet emissions and can provide the basis for preference during tender processes.

2.10 The West Midlands Freight Strategy includes proposals to develop an Environmental Performance Recognition Scheme, working with road freight operators to improve driving techniques, operations and training to improve vehicle emissions, noise and impacts whilst promoting the greater use of low carbon/ electric vehicles and the infrastructure required supporting them. (http://www.centro.org.uk/media/211484/Freight-Strategy.pdf)

15 http://www.care4air.org/ecostars/members.html

16 http://www.tfl.gov.uk/corporate/terms-and-conditions/fors

Ashwoods Hybrid Vehicle. Courtesy of Ashwoods Automotive Limited

Low Emission Vehicle Demonstration

3.1 Though it should not be necessary to replicate low emission vehicle trials in every local authority, few fleet category managers are willing to procure new technologies in volume without demonstrating the technology first.

3.2 The uptake of cleaner fuels and technologies is increasing with the West Midlands, recording the highest number of new electric vehicle registrations outside London (130 EVs were registered in the West Midlands between January 1st and April 30th 2012 [17]). The total number of highway-capable registered vehicles in the UK between 2010 and June 2013 (SMMT[18] figures) is shown in Table 1[19]

17 http://www.dft.gov.uk/topics/sustainable/olev

18 Society of Motor Manufacturers and Traders http://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-2013-Motor-Industry-Facts-guide.pdf?9b6f83

19 http://en.wikipedia.org/wiki/Plug-in_electric_vehicles_in_the_United_Kingdom (adapted)

Table 1 – Registration of highway-capable electric cars by model in the UK between 2010 and June 2013

Model	Total Sales 2010–2013(2)	Market share(1)	Sales 2013 CYTD(2)	Sales 2012	Sales 2011	Sales 2010
Nissan Leaf	2,159	42.9%	825	699	635	
Toyota Prius PHV	765	15.2%	295	470		
Vauxhall Ampera	609	12.1%	150	455	4	
Peugeot iOn	401	8.0%	26	251	124	
Mitsubishi i MiEV	260	5.2%	1	107	125	27
Citroën C-Zero	201	4.0%	45	110	46	
Renault Zoe	132	2.6%	132			
Chevrolet Volt	90	1.8%	23	67		
Smart electric drive	79	1.6%	3	13		63
Renault Fluence Z.E.	74	1.5%	7	67		
BYD e6	50	1.0%	50			
Total registrations	5,034	100%	1,560	2,254	1,082	138

Note: (1) Market share as percentage of the 5,034 highway-capable electric cars registered in the UK since 2010 through June 2013 (Tesla Roadster not reported). (2) Calendar year to date through June 2013.

3.3 The £30m West Midlands CABLED Project is the largest demonstration of EV, hybrid and hydrogen vehicles in the UK and the £6m Plugged-in-Places Programme promotes the introduction of public electric charging points across Birmingham, Coventry, Warwick, Worcester and Northampton, in conjunction with Cenex and the Central Technology Belt.

3.4 The West Midlands has the largest concentration of low emission vehicle technology manufacturing capability in the UK. This is combined with regional research establishments, such as Coventry and Warwick Universities, that provide world class research into vehicle design, development and performance, such as the £29m Low Carbon Vehicle Technology Project[20], a collaborative project between, Coventry University, Tata Motors, Warwick Manufacturing Group, Jaguar Land Rover and Ricardo.

3.5 Coventry City Council has taken a leading role in demonstrating clean vehicle technologies. In 2009 the Energy Savings Trust carried out a Green Fleet Review of the 400 vehicle Coventry grey and liveried fleet, stating, *"...Coventry is undoubtedly well ahead of many Councils in terms of fleet management and its efforts to establish a more sustainable transport solution...."*

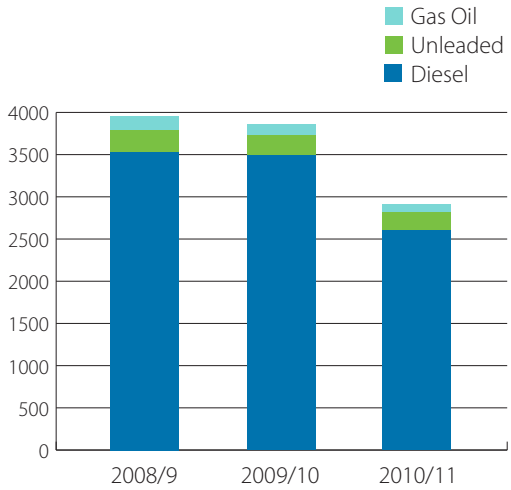
20 http://www2.warwick.ac.uk/fac/sci/wmg/mediacentre/wmgnews/lcvtplaunchannouncement/

3.6 Coventry was selected for participation in the DfT Low Carbon Vehicle Procurement Programme which enabled the Council to procure 44 diesel electric hybrid vans, 2 electric vans, and 5 electric cars. It committed to achieving a 20% reduction in transport related carbon emissions over 5 years through an initial target for low carbon vehicle alternatives of 10% of the overall fleet. The Council has also been involved with the procurement of 3 electric buses to be introduced on the Park and Ride service.

3.7 Coventry has 14 cars in its fleet with average CO_2 emissions of 65 g/km. The table below shows that between 2008 and 2011, the Council reduced CO_2 emissions from its fleet by 1044 tonnes. This will also have resulted in a reduction in other emissions such as nitrogen dioxide and particulates.

3.8 In addition to the procurement of low emission vehicles, Coventry is also focusing on improving the efficiency of vehicle use within the fleet. A trial has been undertaken of technology which provides a traffic light system for van drivers, indicating how fuel efficient their driving styles are. The trial showed that miles per gallon improved significantly with the system, equating to a fuel cost saving of £314.25 per vehicle/annum.

Coventry City Council Fleet Reduction CO_2 – 2008-2011



3.9 As Coventry acknowledge through their experience, low emission vehicle procuring is not easy in economically challenging times due to the incremental costs, and that data on real-world vehicle performance is often difficult to come by.

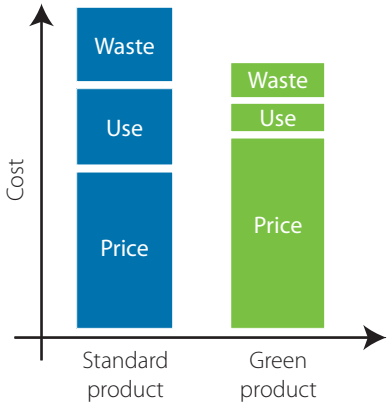
3.10 The ideal progression for the procurement of low emission vehicle technologies is illustrated below:

3.11 In Coventry there was an early commitment to review all vehicle procurement in line with a carbon reduction policy. It is important that local authorities demonstrate leadership in line with their responsibilities to trial clean and fuel efficient vehicles and disseminate findings, not only to other local authorities but within their own communities, promoting increased activity.

3.12 Data gathered through demonstration can help determine suitability in relation to local duty cycles and also acceptability by those required to operate them. Real world data is essential to informing the procurement process and can provide the basis for evaluating more accurate whole life costs. (see section 4). The longer term availability of this type of information could result in more decision making in favour of low emission vehicles and associated infrastructure.

Whole Life Costs

4.1 In 2008 the European Commission produced the report – 'Public Procurement for a Better Environment'[21]. The report included several objectives to help develop better understanding of Green Public Procurement, such as life cycle or whole life costing. Often green products are more expensive than the standard equivalent, although when the whole life costs of operational use and disposal are taken into account, the green product can be relatively cheaper. This is shown in the figure below:



4.2 The EU Clean Vehicles Directive[22] was introduced in 2009, placing requirements on the public sector to use its purchasing power to promote the uptake of clean and energy efficient vehicles. When the public sector either buys or leases a vehicle they must take into account energy consumption, CO_2 emissions and pollutant emissions over the whole lifetime of vehicles. Therefore, the real costs to be encountered over the lifetime operation of vehicles are anticipated, giving a relative advantage (lower lifetime costs) to vehicles that pollute less and consume less energy. The obligation extends to all purchases of road transport vehicles by public authorities or by transport operators charged with public service obligations, as covered by the public procurement Directives[23,24] and Regulations[25].

4.3 The Clean Vehicle Directive is enacted in England, Wales and Northern Ireland by the Cleaner Road Transport Vehicles Regulations 2011[26]. The Regulations state that any public sector contracting authority, entity or operator when purchasing or leasing road transport vehicles must take into account the operational lifetime energy and environmental impacts, in respect of vehicles purchased or leased, including:

- Energy consumption
- Carbon Dioxide emissions
- Emissions of Oxides of Nitrogen
- Emissions of non-Methane Hydrocarbons
- Emissions of Particulate Matter

  (Noise can also be taken into account)

To satisfy the requirements of the Regulations, one of the following options must be chosen:

1. The technical specifications for energy and environmental performance is set out in the documentation for the purchase and leasing of road transport vehicles for the impacts listed above.
2. The energy and environmental impacts may be included in the purchasing or leasing decision by either:
   - Using the impacts as award criteria
   - Applying the required methodology where the impacts are monetised for inclusion into the purchasing or leasing decision.

21 Public procurement for a better environment – EU COM(2008) 400 final

22 http://ec.europa.eu/transport/urban/vehicles/directive/directive_en.htm

23 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:134:0001:0113:en:PDF

24 http://europa.eu/legislation_summaries/internal_market/businesses/public_procurement/l22009_en.htm

25 http://europa.eu/legislation_summaries/competition/specific_sectors/transport/l24488_en.htm

26 http://www.legislation.gov.uk/uksi/2011/1631/made

4.4 To monetise impacts a methodology is provided in Article 6 of the Clean Vehicle Directive. Damage costs, the costs to health, natural environment and buildings from emissions are assigned as follows (based on 2007 prices):

CO_2	NO_x	NMHC	Particulate Matter
0.03-0.04 Eur/kg	0.0044 Eur/g	0.001 Eur/g	0.087 Eur/g

Key: NOx – Oxides of Nitrogen
NMHC – Non-Methyl Hydrocarbons

4.5 The EU has produced a whole life cost calculator tool to support the introduction of the Directive. This can be found on the Clean Vehicle Portal – www.cleanvehicle.eu

The Portal is a useful resource, although it would benefit from increased transparency as to inputs (i.e. drive cycles used) and the inclusion of a biomethane calculator.

4.6 A key issue identified by Coventry City Council Fleet Management in evaluating clean vehicle technologies and fuels is the availability of real world vehicle performance information. It is acknowledged that real life emissions can differ significantly from those produced over standard European test cycles, such as the New European Drive Cycle (NEDC), which may not replicate real-world driving conditions. Emissions of NO_x in particular have been found to be significantly higher when in use compared with published drive cycle data[27]. A study of passenger vehicles has shown that real-world CO_2 emissions are between 15% and 40% greater than the NEDC data[28].

4.7 As part of the LETCP a simple West Midlands Whole Life Cost (WLC) Model has been developed, looking at the operational energy costs and environmental impacts from a variety of vehicles that are used by the public sector, incorporating real world test data where available. The model incorporates whole life cost assessment on gas vehicles undertaken by Bradford Metropolitan District Council, including real-world test data from refuse collection vehicle trials in Leeds and Bradford. Operational parameters (such as mileage etc.) are based on those of a typical West Midlands local authority. Some of the outputs of the model can be seen in Tables 2 and 3 and also in Charts 1 and 2.

4.8 It can be seen from the model outputs that the sum of operational lifetime energy and environmental damage costs for low emission vehicles are less than their diesel counterparts. The differential becomes more significant when fuel use is high as in heavy duty vehicles. This cost differential however, may not cover the incremental cost of the low emission vehicle compared with diesel. In order to assess the overall whole life costs the following cost considerations will be taken into account, in addition to the costs for operational energy and environmental impacts:

- Vehicle cost and depreciation
- Maintenance
- Vehicle Excise Duty (VED) and Reduced Pollution Certificates (RPC)
- Low emission vehicle grants eg Plug-in Car & Van Grant[29] and Low Carbon Vehicle Procurement Programme subsidy for hybrid vans[30]
- Other incentives/disincentives for low emission vehicles/standard vehicles

As part of the work of the ongoing LETCP, in conjunction with Coventry City Council and other West Midlands Authorities an on-line Whole Life Cost Calculator (WLCC) is being developed. The calculator will allow public service fleet managers to compare the whole life costs of a range of typical public service vehicles with low emission alternatives.

27 http://www.erg.kcl.ac.uk/News.aspx?NewsId=Defrareport

28 www.lowcvp.org.uk – Preparing for a Life Cycle CO2 Measure, Ricardo, 2011

29 http://www.dft.gov.uk/topics/sustainable/olev/plug-in-van-grant & http://www.dft.gov.uk/topics/sustainable/olev/plug-in-car-grant

30 http://www.cenex.co.uk/programmes/lcvpp

Table 2 – Operational Energy Costs & Environmental Impacts of Key Public Sector Vehicles

Vehicle	Energy source	Total km	Energy cost	CO_2 cost	Pollutant cost	Total cost
Ford Focus	Diesel	80,000	£3,529	£254	£44	£3,827
Nissan Leaf	Electricity (night)	80,000	£1,135	£160	£-	£1,295
VW Caddy	Diesel	80,000	£6,123	£437	£75	£6,635
VW Caddy CNG	Biomethane	80,000	£4,001	£97	£22	£4,120
Renault Kangoo	Diesel	80,000	£4,550	£328	£52	£4,930
Renault Kangoo ZE	Electricity (night)	80,000	£1,378	£194	£-	£1,572
Ford Transit	Diesel	96,000	£8,024	£578	£68	£8,670
Smith Edison (transit based)	Electricity (night)	96,000	£3,779	£533	£-	£4,311
Iveco Daily	Diesel	96,000	£10,207	£729	£123	£11,059
Iveco Daily CNG	Biomethane	96,000	£6,704	£162	£41	£6,907
MAN TGL 7.5t	Diesel	120,000	£30,646	£2,206	£2,150	£35,002
Smith Newton 7.5t	Electricity (night)	120,000	£11,808	£1,665	£-	£13,473
MB Econic RCV	Diesel	70,000	£69,984	£4,999	£3,273	£78,256
MB Econic NGT RCV	Biomethane (CNG)	70,000 (70,000)	£62,142 (43,865)	£1,502 (5,974)	£410 (410)	£64,054 (50,221)
Single deck bus	Diesel	125,000	£41,241	£2,946	£1,929	£46,115
Single deck gas bus	Biomethane	125,000	£29,961	£724	£198	£30,883

Note – All the vehicles in the table are in pairs, one diesel with an equivalent EV or gas vehicle. The refuse collection vehicle shows comparative figures for diesel, biomethane and CNG. Mileage figures are based on estimates from a typical local authority and assume five years of use. CO2 costs for the EVs are based on charging at night, with a significantly lower marginal emissions factor as base load electricity is used. Emissions for all vehicles under 7.5t are based on the NEDC combined cycle. A variety of cycles and/or real world figures were used in estimating figures for heavier vehicles.

Table 3 – Whole Life Costs of Refuse Collection Vehicles

RCV	Total km	Fuel Cost (£)	CO_2 Cost	NO_x Cost (£)	PM Cost (£)	Maintenance Cost (£)	Total Cost (£)
Euro 5 Diesel	70,000	69,984	4,999	2,408	865	98,000	176,256
Euro 6 Diesel	70,000	73,483	5,249	482	432	98,000	177,646
CNG	70,000	43,865	5,974	382	28	98,000	148,248
Biomethane	70,000	62,142	1,368	382	28	98,000	161,919

Note – The figures assume that the RCV covers 10,000 miles per annum and is kept for 7 years. The CNG and biomethane emission figures are based on real-world vehicle trials. The diesel emission figures are based on the assumption that these vehicles achieve the same rate as specified in their test drive cycles (i.e. they are not real-world). Diesel is assumed to cost £1.17 per litre and biomethane is assumed to cost 85p per kg

Chart 1 – Total CO_2 costs and total pollutant costs (NO_x, PM and NMHC) for each vehicle

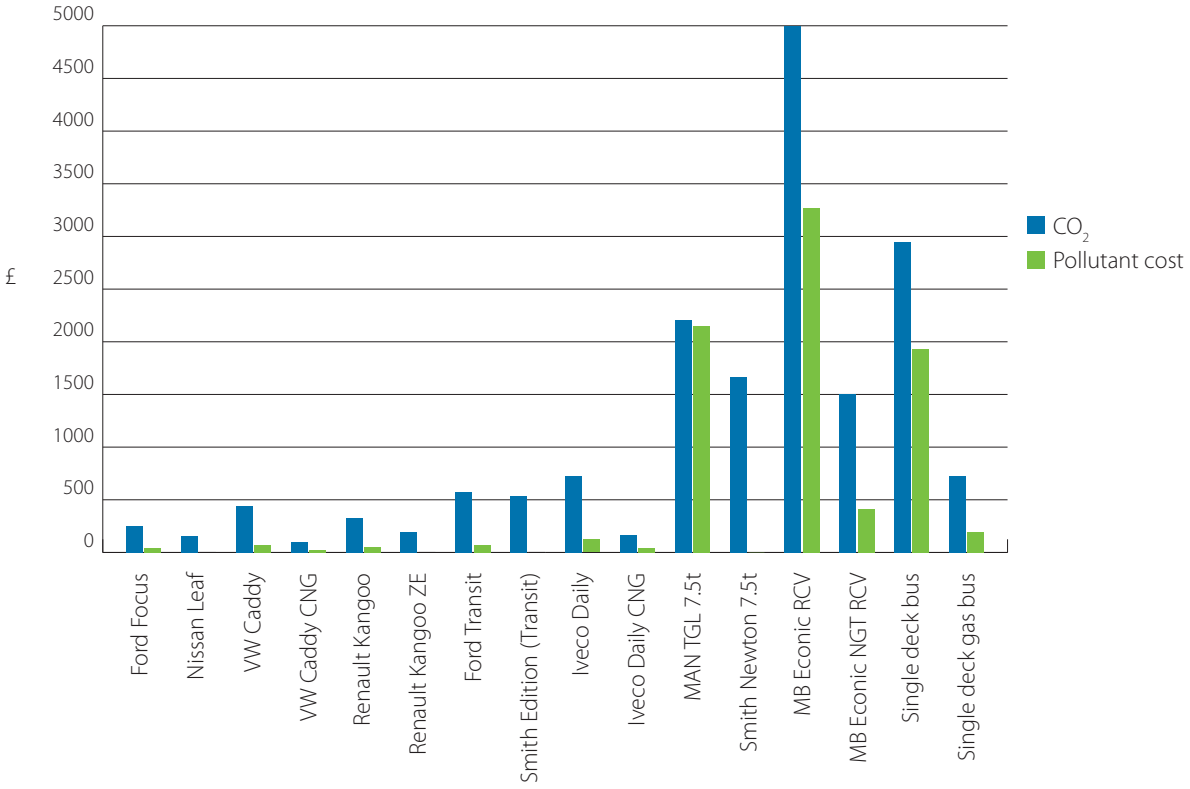
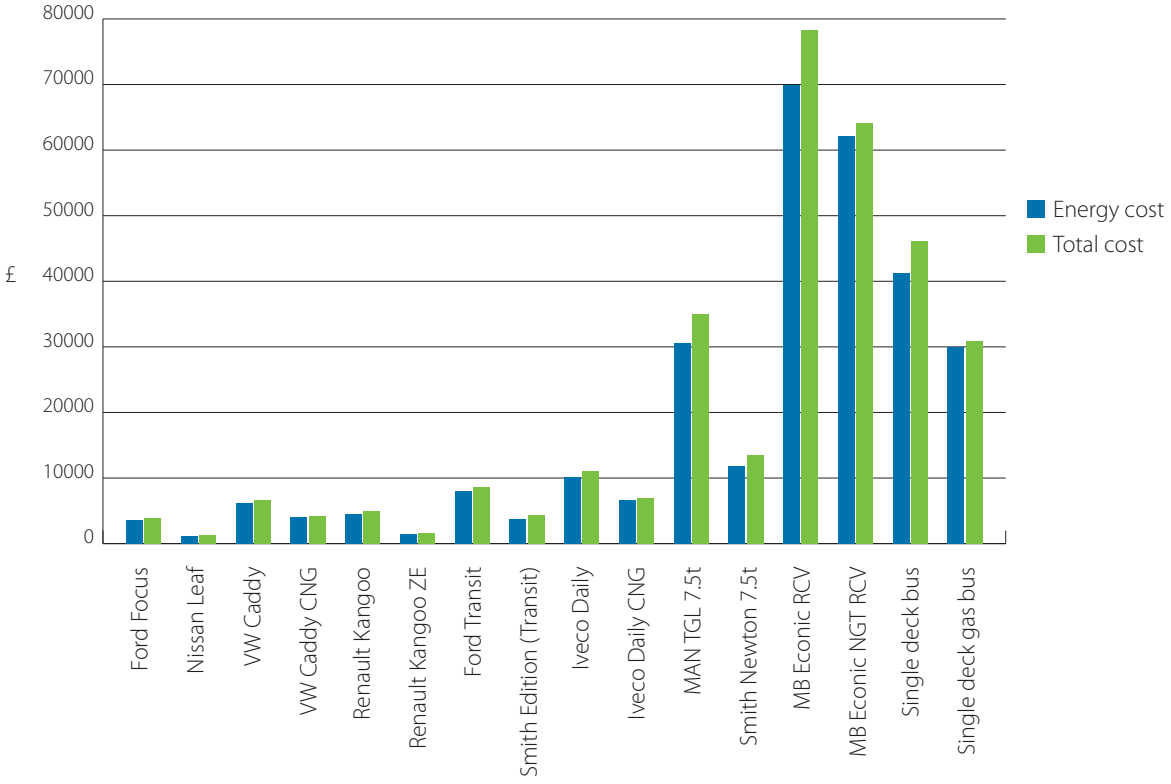


Chart 2 – Total energy/fuel cost for each vehicle, and the energy cost plus CO_2 and pollutant costs



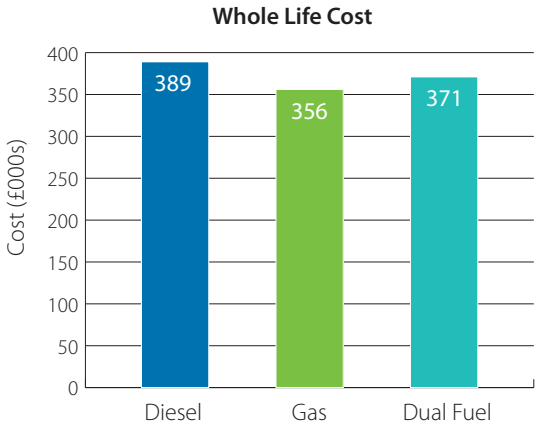
4.9 Birmingham City Council has now adopted the concept of whole life costing as part of its procurement strategy. One of the key barriers to local authorities adopting the whole life cost approach is that fleet category managers often control a capital budget for vehicle procurement while revenue budgets are held with departmental vehicle users, thus preventing a holistic approach to vehicle procurement and use whereby whole life costs can be reduced and environmental benefits gained.

4.10 One of the key considerations for integrating low emission vehicle technologies and fuels into a fleet operation is the initial cost of providing alternative vehicle refuelling infrastructure, such as gas/biomethane pumps and electric vehicle recharging points. When considered as part of the whole life costs of clean and energy efficient vehicles, these additional costs can deter investment in low emission technology. Chart 3 illustrates how the whole life costs (excluding environmental impacts) are lower for gas trucks, compared with diesel, if infrastructure is already provided.

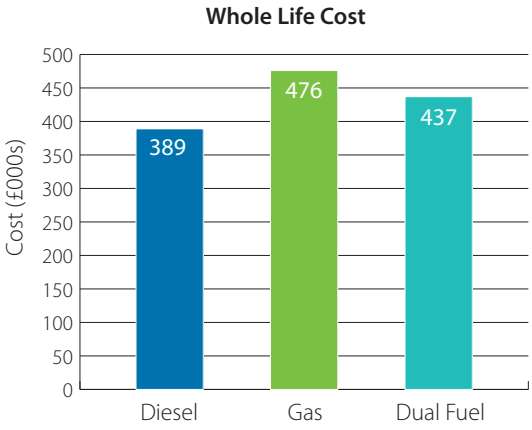
4.11 West Midlands Authorities need to consider innovative and cost-effective mechanisms that can deliver alternative vehicle refuelling infrastructure. Policies and measures to fund refuelling infrastructure can be found in the LETCP Air Quality Planning Guidance[31]. Additionally, consideration should be given to shared provision between local authorities and through the development of public private partnerships. Further details are provided in section 7.

Chart 3. Whole Life Costs for a 44 tonne Truck

With gas refuelling infrastructure



Without gas refuelling infrastructure



4.12 When developing clean and fuel efficient vehicle strategies a key issue is the medium and long term consideration of fuel availability (security), cost and penetration of renewable energy. Diesel costs have increased by 34% over the last 3 years and are projected to continue rising[32]. The cost of natural gas has maintained a differential cost 60% lower than the cost of diesel[33]. The availability of biomethane is increasing and through incentives, for example the Renewable Heat Incentive[34], the gas grid should continue to decarbonise and the supply of certificated biomethane to supply outlets remote from the production source should increase[35]. National Grid estimates suggest that 18% of all gas used for domestic heating will be sourced from biomethane content by 2020[36]. Similarly, the electricity grid will continue to decarbonise through the increased use of renewable electricity.

31 http://cms.walsall.gov.uk/index/environment/pollution/air_quality/low_emissions_towns_and_cities_programme.htm

32 www.decc.gov.uk

33 http://www.cngservices.co.uk

34 https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi

35 See BMC (Biomethane Certification)/REA Green Gas Certification

36 http://www.nationalgrid.com/corporate/About+Us/climate/press/020209.htm

Government buying standards for transport

5.1 The Cleaner Road Transport Vehicles Regulations can be satisfied if the technical specifications for energy and environmental performance are set out in the procurement documentation or if the energy and environmental impacts are included in the purchasing or leasing decision by using the impacts as award criteria. The EU has developed Green Public Procurement criteria for the purchase and lease of vehicles and transport related services, such as waste collection and public transport[37]. The criteria relate to CO_2 and pollution emissions and are presented as good practice (known as core criteria) and best practice (known as comprehensive criteria). These standards are to be periodically reviewed and updated.

5.2 In May 2012 Sustainability West Midlands, in partnership with Improvement and Efficiency West Midlands, published a standard set of specifications and clauses for use in procurement contracts for four key category areas of local authority expenditure, including transport. The aim of this work was to ensure that authorities fully understand how they can embrace low carbon procurement clauses into contracts and how they can be monitored and reviewed in line with corporate programmes and targets. The report 'Low Carbon Procurement – Vehicles and Transport Services'[38] incorporates EU GPP criteria, including the following standards for CO_2 emissions when buying new cars and vans.

Vehicle Type	CO_2 g/km Good Practice	CO_2 g/km Best Practice
Mini	110	90
Small	120	100
Compact	130	110
Mid	150	130
Large	170	150
High/exclusive	270	-
Off-road/family wagon	210	-
Small vans (N1, Class 1)	150	-
Other vans (N1, Class 2 & 3)	220	-

5.3 In line with EU GPP criteria for transport, the Government has introduced Buying Standards for Transport[39]. A full copy of these standards, including minimum mandatory and best practice specifications for new vehicles and transport services, award criteria and performance monitoring criteria can be found in Annex 1.

All West Midland Authorities comply with the Government Buying Standards when procuring vehicles.

5.4 When following procurement standards regard to should be had to BS 8903: 2010. This is the world's first standard for sustainable procurement. The standard gives guidance on how sustainable procurement principles and practices can be embedded across an organisation and its supply chains. It also gives practical information that supports the implementation of sustainable procurement practices, covering leadership and governance, people, risk, engagement and measurement.

5.5 Each stage of the procurement process is covered by the standard and it is applicable to all sizes of organisations across the public, private and third sectors. This standard is closely aligned to the five themes outlined within the Flexible Framework[40], which was developed by the Government's Sustainable Procurement Task Force in 2006. The standard articulates best practice and attempts to cover every single aspect of a procurement organisation from recruitment and training through to processes, supplier engagement and results measurement.

37 http://ec.europa.eu/environment/gpp/toolkit_en.htm

38 http://www.sustainabilitywestmidlands.org.uk/projects/?/Public+sector+-+Low+Carbon+Procurement/1718

39 http://sd.defra.gov.uk/advice/public/buying/products/transport/standards/

40 https://www.gov.uk/government/publications/sustainable-procurement-in-government-guidance-to-the-flexible-framework

Economies of Scale

6.1 The combined West Midland local authority liveried fleet runs to approximately 3,500 vehicles[41]. Whilst it is only a small proportion of the total West Midlands fleet, there is significant potential to promote the uptake of clean and fuel efficient vehicles. It is acknowledged that the volume purchase of goods and services can bring about a reduction in unit costs through economies of scale.

6.2 Often, even when whole life costing is taken into account, low emission vehicle technology is more expensive than standard vehicle technology. Procurement frameworks (vehicles are sourced in volume and offered for purchase under mini-procurement competitions) currently exist, allowing cost reductions for diesel and petrol vehicles, usually widening the incremental cost of low emission technology. New frameworks are emerging however, including and allowing for cost reductions for low emission vehicles. Such frameworks are being promoted by Eastern Shires and Yorkshire Purchasing Organisations (ESPO[42]/ YPO[43] currently manage the £500m Pro-5 Procurement Framework for vehicles over 3.5 tonnes).

Photo courtesy of The Low Emission Strategies Partnership

41 Fleet category communications

42 http://www.espo.org/

43 http://www.ypo.co.uk/

6.3 Transport for London manages a £100m Electric Vehicle and Infrastructure Framework[44] which offers cost savings on electric, plug-in electric and hybrid electric vehicles and re-charging facilities. There is potential for West Midland authorities to take advantage of this framework.

6.4 Coventry City Council participated in the Low Carbon Vehicle Procurement Programme (LCVPP[45]), an Office of Low Emission Vehicles scheme and managed by Cenex, seeking to promote the manufacture of UK hybrid and electric vans and achieve reductions in the costs of purchase through volume supply. 500 vans, supported by LCVPP, are now available with a subsidy (Ashwoods Hybrid[46]) to public sector organisations. Electric vans are supported with a subsidy through the Plug-in Van Grant.

6.5 West Midland authorities should investigate whether discounts for low emission vehicles and infrastructure can be progressed further through joint procurement exercises or by influencing the development of appropriate procurement frameworks. Further information on approaches to collaborative procurement can be obtained from the Efficiency and Reform Group (ERG- Cabinet Office)[47] and Improvement and Efficiency West Midlands[48].

44 https://www.sourcelondon.net/londons-electric-plans-charge-ahead

45 http://www.cenex.co.uk/programmes/lcvpp

46 http://www.ashwoodshybrid.co.uk/lcvpp_programme.php

47 http://www.cabinetoffice.gov.uk/unit/efficiency-and-reform-group

48 http://www.westmidlandsiep.gov.uk/

Innovative Procurement

7.1 Innovative procurement is capable of assisting public sector organisations to achieve cost reductions and facilitate the uptake of low emission vehicles and expansion of associated infrastructure.

7.2 Examples of innovation include:

eProcurement - local authorities have been encouraged to use web-based/on-line techniques in their purchasing practices to speed up the process of procurement, reduce overhead costs and potentially drive down the pricing of goods and services. eTendering, eAuctions and eInvoicing have been demonstrated widely[49]. An eAuction is a process for conducting a Dutch-style reverse auction via the web, essentially driving down prices in highly competitive markets as an alternative to the traditional tender process. It is usually facilitated by a specialist provider for a one-off fee, using their own software and website.

7.3 Wolverhampton City Council has demonstrated the use of eAuctions to procure school bus services on line, with realised cost savings of 19%. Participating service suppliers, aware of their customer preferred ranking at staged intervals in the auction, were encouraged to reduce their pricing in decrements and/or enhance their specifications, potentially including sustainability to secure the contract award. Cost savings are made for the purchaser due to a decrease in administrative overheads.

7.4 As part of the Market Development Review: Low Carbon Vehicle Procurement in Birmingham[50], Sustainability West Midlands and the Birmingham Environmental Partnership has suggested that Buy4Good, a social enterprise, can play a co-ordinating role in sustainable procurement on behalf of Birmingham City Council.

Photo courtesy of DHL/Jaguar Land Rover

Wet Leasing

7.5 The cost of providing infrastructure for alternatively fuelled vehicles often deters fleet operators from taking up these technologies, even where cost savings can be made when vehicle numbers reach a break- even point. This is particularly relevant in terms of demonstrations whereby the cost of providing infrastructure cannot be justified in relation to the trialling of a small number of vehicles. Wet leasing overcomes this issue by allowing the cost of the infrastructure to be paid via an incremental cost to the fuel consumed through the nozzle or plug. Leeds City Council successfully trialled a biomethane powered RCV by wet leasing the filling station, helping to develop a robust business case for further purchases. They have now procured a biomethane filling station outright and a further 14 gas powered vehicles.

49 Dept for Communities and Local Govt (CLG) review of Local Govt National Procurement Strategy, August 2006

50 www.sustainabilitywestmidlands.org.uk

Public Private Partnerships

8.1 Driven by a mixture of strengthening CSR[51] agendas, enhanced positioning in tendering processes and the continuing rise in fossil fuel costs, private sector companies are increasingly adopting low emission vehicle technologies and fuels.

8.2 Companies such as **TNT** are utilising electric delivery vehicles in Birmingham and other blue chip organisations – including **DHL, Sainsbury's, Tesco, Waitrose, Eddie Stobart, Wincanton, ASDA** and **UPS** - are buying gas vehicles in increasing numbers. UPS have installed a biomethane refuelling facility at Tamworth to service their London 2012 dual fuel fleet, and Tesco, DHL and Eddie Stobart are utilising a major biomethane refuelling facility at Daventry International Rail Freight Terminal (DIRFT). All these companies have plans to expand their low emission vehicle activity within the West Midlands.

Mercedes Dual Fuel Axor Truck (UPS 2012)

8.3 There is significant potential to increase knowledge transfer of alternative vehicle technology performance and achieve cost reductions in infrastructure provision and fuel costs through the development of public private partnerships. It is anticipated that any increase in clean vehicle and renewable energy activity will help stimulate economic development in the region.

8.4 Opportunities may be pursued through the development of the emerging West Midlands Freight Strategy[52]. Options for SMEs to achieve cost savings through the provision of shared facilities with local authorities should be explored further.

8.5 The LETCP Low Emission Vehicle Demonstration Database (see Section 3.9) will include details of private sector companies with low emission vehicle and fuel capabilities in the West Midlands, including future plans, for the purposes of establishing public private partnerships. Working alongside the LEPs, fleet operators in the region will be identified with a view to assessing the potential for knowledge transfer and provision of shared facilities.

51 Corporate Social Responsibility Reporting

52 http://www.centro.org.uk/about-us/corporate-publications/freight/

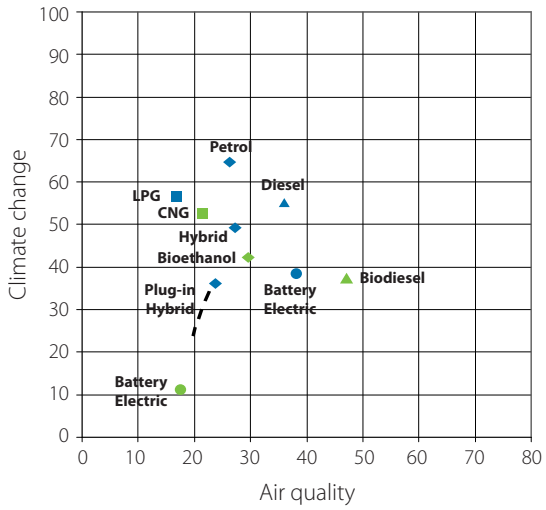
Low Emission Fleet Strategies

9.1 With responsibilities for improving air quality and reducing greenhouse gas emissions, local authorities and other public sector organisations need to be able to quantify their fleet emissions and set targets for reductions, above and beyond business as usual projections. The identification of appropriate low emission technologies should be assisted through controlled demonstration, knowledge transfer and cost-effective opportunities pursued for take-up through relevant procurement processes. The overall aim should be the development and implementation of a Low Emission Fleet Strategy.

9.2 While local considerations should influence the development of a Low Emission Fleet Strategy, it is envisaged that a West Midlands model can be articulated through the development of the LETCP Low Emission Strategy, informing a common approach across the West Midlands.

9.3 Camden Council has developed a best practice green fleet strategy that can provide a basis for West Midland authorities. Camden has used data from vehicle demonstrations and life cycle analysis to produce a hierarchy of low emission vehicle technologies in terms of greenhouse gas emissions and their impact on air quality. Requirement for the increased procurement of specified technologies is outlined for the next few years, alongside dates for compliance with European Emission Standards. A summary of the Camden Fleet Strategy is shown in Table 4.

Table 4 Camden Low Emission Fleet Strategy



Clean Fuel & Vehicle Technology Hierarchy:

Electric
Plug-in hybrid
Bio-methane fitted with hybrid assist
Bio-methane
Compressed Natural Gas/Liquid Natural Gas fitted with hybrid assist
Bi-fuel Liquid Petroleum Gas fitted with hybrid assist
Compressed Natural Gas/Liquid Natural Gas
Bi-fuel Liquid Petroleum Gas
Petrol Hybrid
Diesel Hybrid
Bio-diesel produced from used cooking oil
Bio-diesel produced from virgin plant oil
Bio-ethanol
Ultra low sulphur petrol
Ultra low sulphur diesel

Clean Vehicles & Target Dates:

2009/10	2010/11	2011/12	2012/13
15% from options 1-4 70% from options 5-10 15% from options 11-15	20% from options 1-4 65% from options 5-10 15% from options 11-15	25% from options 1-4 65% from options 5-10 10% from options 11-15	30% from options 1-4 60% from options 5-10 10% from options 11-15

European Emission Standard Targets:

	2009/10	2010/11	2011/12	2012/13
Passenger cars/light commercial (<3.5T)				
Euro 4	100%	75%		
Euro 5		25%	75%	50%
Euro 6			25%	50%

For further information see **www.camden.gov.uk/print/theme/clearleft-camden/ccm/content/environment/air-quality-and-pollution/air-quality/greening-camdens-vehicle-fleet.en**

Recommendations

10.1 Ongoing consultation will take place with all West Midland local authority procurement officers, environmental practitioners and freight & fleet category managers regarding the production of recommended policies and measures that can help improve knowledge transfer of information and mechanisms, whilst also cost-effectively improving the emissions of the West Midlands vehicle fleet under the influence of the public sector, and implemented coherently across the region. This will involve Centro and other stakeholders, including Sustainability West Midlands, Local Strategic Partnerships, Local Economic Partnerships and Universities, looking at co-ordinated sustainable policy optimisation including best practice, focusing on environmental improvement and economic development with social benefits for the West Midlands.

Photograph by kind permission of Elektromotive Ltd

Annex 1 – Government Buying Standards for Transport

Impact Area	Minimum mandatory
Car	CO_2 emissions for fleet average for new cars should not exceed 130 g CO_2/km
Vans – proposed mandatory for 2013	CO_2 emissions for fleet average for new vans should not exceed 175 g CO_2/km
Bus	Vehicle engines must be certified as meeting EURO V standard for emissions according to EC Directive 2005/55/EC
Waste Collection Trucks	Vehicle engines must be certified as meeting EURO V standard for emissions according to EC Directive 2005/55/EC
Bus Services	All vehicles used in carrying out the service must have engines meeting EURO IV standards, according to EC Directive 2005/55/EC. Where vehicles are not certified as EURO IV, but technical after-treatment has achieved the same standard, this should be documented in the tender application.
Waste collection services	All vehicles used in carrying out the service must have engines meeting EURO IV standards, according to EC Directive 2005/55/EC. Where vehicles are not certified as EURO IV, but technical after-treatment has achieved the same standard, this should be documented in the tender application.

Impact Area	Best Practice
Cars	Same as mandatory. CO_2 emissions for fleet average for new cars to be lower than those required in the core technical specification. Exhaust gas emissions – vehicles must comply with the EURO 5 standard.
Vans	Same as mandatory. CO_2 emissions for fleet average for new vans (after 2012/13) to be lower than those required in the core technical specification. Exhaust gas emissions – vehicles must comply with the EURO 5 standard.
Buses	Additional criteria to the mandatory are: The vehicle is equipped with gear shift indicators. The vehicle is equipped with tyre pressure monitoring systems Vehicles' exhaust pipes must not be located on the same side as the passenger door. Where vehicles have air-conditioning systems using fluorinated gases, the gas used must have a global warming potential (GWP) less than 2,500. Vehicle emissions must be certified as meeting EURO V standard for emissions, according to EC Directive 2005/55/EC.
Waste collection trucks	Vehicle engines must be certified as meeting the EURO V standard for emissions, according to EC Directive 2005/55/EC.
Bus services	Same as minimum mandatory.
Waste collection services	Same as minimum mandatory.

Minimum award criteria

Impact Area	Minimum award criteria
Cars	Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen). Noise emissions to be lower than those established by law (in member state). Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.
Vans	Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen) Noise emissions to be lower than those established by law (in member state) Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.
Buses	Vehicle engines must be certified as meeting EURO VI standard (where available) for emissions. Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen). Noise emissions to be lower than those established by law (in member state). Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.
Waste vehicles	Vehicle engines must be certified as meeting EURO VI standard (where available) for emissions. Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen from renewable sources). Average noise emissions to be lower than 102dB (A) measured according to Directive 2000/14/EC. Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.

Bus services	Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EURO V or VI where applicable). Average noise emissions to be lower than those established by law (in member state). Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.
Waste collection services	Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EURO V or VI where applicable). Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen from renewable sources) Average noise emissions to be lower than 102dB (A) measured according to Directive 2000/14/EC. Use of recycled content. Inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic). Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products.

Impact area	Minimum contract performance clauses
Cars	Not available
Vans	Not available
Buses	Not available
Waste vehicles	Not available
Bus services	New vehicles – all vehicles newly purchased after the award of the contract and used in carrying out the service must comply with the Euro VI standard and be fitted with GSI (Gear shift indicator) and TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door. The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled. Fuel consumption – The contractor must provide at the end of each year a report stating the amount of fuel consumed in carrying out the service (petrol, diesel, biofuel, CNG, electricity…) and the CO_2 emissions derived from that consumption.
Waste collection services	New vehicles – all vehicles newly purchased after the award of the contract and used in carrying out the service must comply with the Euro VI standard and be fitted with GSI (Gear shift indicator) and TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door. The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled. Fuel consumption - the contractor must provide at the end of each year a report stating the amount of fuel consumed in carrying out the service (petrol, diesel, biofuel, CNG, electricity…) and the CO_2 emissions derived from that consumption. All drivers involved in carrying out the service must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.

Contract performance clauses – relating to best practice

Impact area	Best practice contract performance criteria
Cars	The contractor must selectively collect used lubricant oils and tyres and have a contract with one or several authorised waste management organisations for the correct treatment of these waste fractions.
Vans	The contractor must selectively collect used lubricant oils and tyres and have a contract with one or several authorised waste management organisations for the correct treatment of these waste fractions.
Buses	Not applicable
Waste vehicles	Not applicable
Bus services	Use of low viscosity engine lubricant oils or regenerated lubricant oils with a min. 25% regenerated oil base in vehicle maintenance. Grades stipulated in GPP product sheets. Efficient tyres: commitment to use low rolling resistance tyres – potential limit values set out in the GPP product sheet. Oils in tread rubber: commitment to use tyres that do not contain oils that are subject to labelling in accordance with Directive 67/548/EEC in the tread rubber. All drivers involved in carrying out the service must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency. The contractor can provide a list of the drivers and their certificates in eco-driving training.
Waste collection services	The contractor must provide at the end of each year a report stating the amount of fuel consumed in carrying out the service (petrol, diesel, biofuel, CNG, electricity) and the CO_2 emissions derived from that consumption. Use of low viscosity engine lubricant oils or regenerated lubricant oils with a min. 25% regenerated oil base in vehicle maintenance. LVL are those corresponding to SAE grated number 0W30 or 5W30 or equivalent. The contractor can present every year the amount of the lubricant oil used in the vehicles' maintenance and their viscosity grade number. Efficient tyres: commitment to use low rolling resistance tyres – potential limit values set out in the GPP product sheet.

Best practice award criteria

Impact area	Best practice award criteria
Cars	Capability to use renewable energy (biofuels, renewable electricity or hydrogen from renewable energy sources). The vehicle is equipped with gear shift indicators. The vehicle is equipped with tyre pressure monitoring systems (TMPS). Where vehicles have air-conditioning systems using fluorinated gases, the gas used must have a global warming potential (GWP) less than or equal to 150. If the GWP is higher than 150 the leakage rate from the system must not exceed a specified rate depending on the type of gas / system. Commitment to use low viscosity engine lubricant oils or regenerated lubricant oils with a min. 25% regenerated oil base in vehicle maintenance. Grades stipulated in the GPP product sheets. Noise from tyres: equip vehicles with tyres with noise emissions below maximum established by law. Efficient tyres: commitment to use low rolling resistance tyres – potential limit values set out in the GPP product sheet Oils in tread rubber: commitment to use tyres that do not contain oils that are subject to labelling in accordance with Directive 67/548/EEC in the tread rubber. Noise emissions lower than those established by law.
Vans	Capability to use renewable energy (biofuels, renewable electricity or hydrogen from renewable energy sources). The vehicle is equipped with gear shift indicators. The vehicle is equipped with tyre pressure monitoring systems (TMPS). Where vehicles have air-conditioning systems using fluorinated gases, the gas used must have a global warming potential (GWP) less than or equal to 150. If the GWP is higher than 150 the leakage rate from the system must not exceed a specified rate depending on the type of gas / system. Commitment to use low viscosity engine lubricant oils or regenerated lubricant oils with a min. 25% regenerated oil base in vehicle maintenance. Grades stipulated in product sheets. Noise from tyres: equip vehicles with tyres with noise emissions below maximum established by law. Efficient tyres: commitment to use low rolling resistance tyres – potential limit values set out in the product sheet. Oils in tread rubber: commitment to use tyres that do not contain oils that are subject to labelling in accordance with Directive 67/548/EEC in the tread rubber. Noise emissions lower than those established by law.
Buses	As minimum award criteria.
Waste vehicles	The vehicle is equipped with tyre pressure monitoring systems. The vehicle's emissions from the separate engines for auxiliary units meet the exhaust emission limits below according to Directive 97/68/EEC, level IIIa (constant rpm). Potential limit values set out in the GPP product sheet.
Bus services	Capability to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen from renewable sources). Proportion of vehicles equipped with gear shift indicators to monitor fuel usage. Proportion of vehicles equipped with tyre pressure monitoring systems (TMPS). Proportion of vehicles used with air-conditioning systems where the gas used has a global warming potential (GWP) of less than 2,500. Further details are set out in the GPP Product Sheet.
Waste collection services	Proportion of vehicles equipped with tyre pressure monitoring systems (TMPS). The vehicle's emissions from the separate engines for auxiliary units meet the exhaust emission limits below according to Directive 97/68/EEC, level IIIa (constant rpm) potential limit values set out in the product sheet.

For further information please telephone Steve Dewar, Coventry City Council on 02447 6831883, or email steve.dewar@walsall.gov.uk

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