



Fleet Emissions Reduction Action Plan 2015 - 2020

Towards a Zero Emissions Fleet



Introduction

The City of Stirling has clearly articulated its vision to reduce greenhouse gas emissions in its Strategic Community Plan and many other corporate documents. The City has identified key areas of its business that generate greenhouse gas emissions and is actively implementing strategies to reduce or mitigate those emissions. The City's Fleet generates approximately 27% of all greenhouse gases that the City emits. This Action Plan details tangible outcomes to reduce vehicle fleet emissions working towards a zero emissions target for the City's fleet.

The City's fleet offers opportunities to innovate and drive change to lower emissions. The current fleet strategy seeks to optimise utilisation and maximise whole of life costs. There have been significant technological advances in both vehicle development (low emitting vehicles) and fuel supplements and alternatives (hydrogen, electricity, natural gas) which are now available and can be incorporated into the corporate fleet to assist in meeting its target to reduce vehicle emissions.

The City aims to implement actions that will contribute towards a zero emissions target for fleet operations. Actions will be delivered across three broad objectives that will see the City:

1. Establish an optimum configuration of fleet vehicles and support services that would produce the least emissions;
2. Lead by example in sustainable fleet management; and
3. Support and enable behaviours that reduce fleet emissions.

Zero emissions is an ambitious target that will require the City to overcome technical challenges as it continues to lead in sustainable management and development, ensuring that the City's fleet maximises community benefit, maintains economic viability, and minimises environmental impacts.

Strategic Alignment

Strategic Community Plan

The City's Strategic Community Plan sets a goal to be an Energy Wise City with an objective for the City's energy use and greenhouse gas emissions to be reduced. To achieve this goal, the City's Corporate Business Plan has set a strategic activity to "Undertake energy efficiency and emissions review for fleet vehicles, and set targets for improvement" (Activity 2.2.3.1). This Fleet Emissions Reduction Action Plan aims to deliver on this strategic activity.

Oil Risk Strategy

This action plan also supports the City's Oil Risk Strategy, adopted by Council 10 July 2012 (0710/013). The Oil Risk Strategy aims to increase the City resilience to increased costs of fuel and supply interruptions associated with peak oil that may disrupt service provision in the future.

The City's Oil Risk Strategy recommends the following broad strategies:

1. Reduce the number of kilometres that people and goods travel;
2. Reduce or eliminate the use of oil in personal and freight transport;
3. Enable Stirling to be less reliant on external sources of electricity derived from fossil fuels;
4. Inform and engage residents, businesses and Council personnel in successfully dealing with the peak oil challenge; and
5. Create a contingency plan setting out steps to be taken to reduce the disruption associated with peak oil if the City has not taken proactive measures in time.

Our Emissions Profile

The City's current greenhouse gas emissions are generated by many contributing sources including streetlights, buildings, facilities, parks and vehicles. The chart below shows that in 2013/14, vehicles represented 27% of the total greenhouse gas emissions under the City's operational control (streetlights not included). This equates to around 4,095 T CO₂-e which are referred to in the remainder of the document as 'greenhouse gas emissions'.

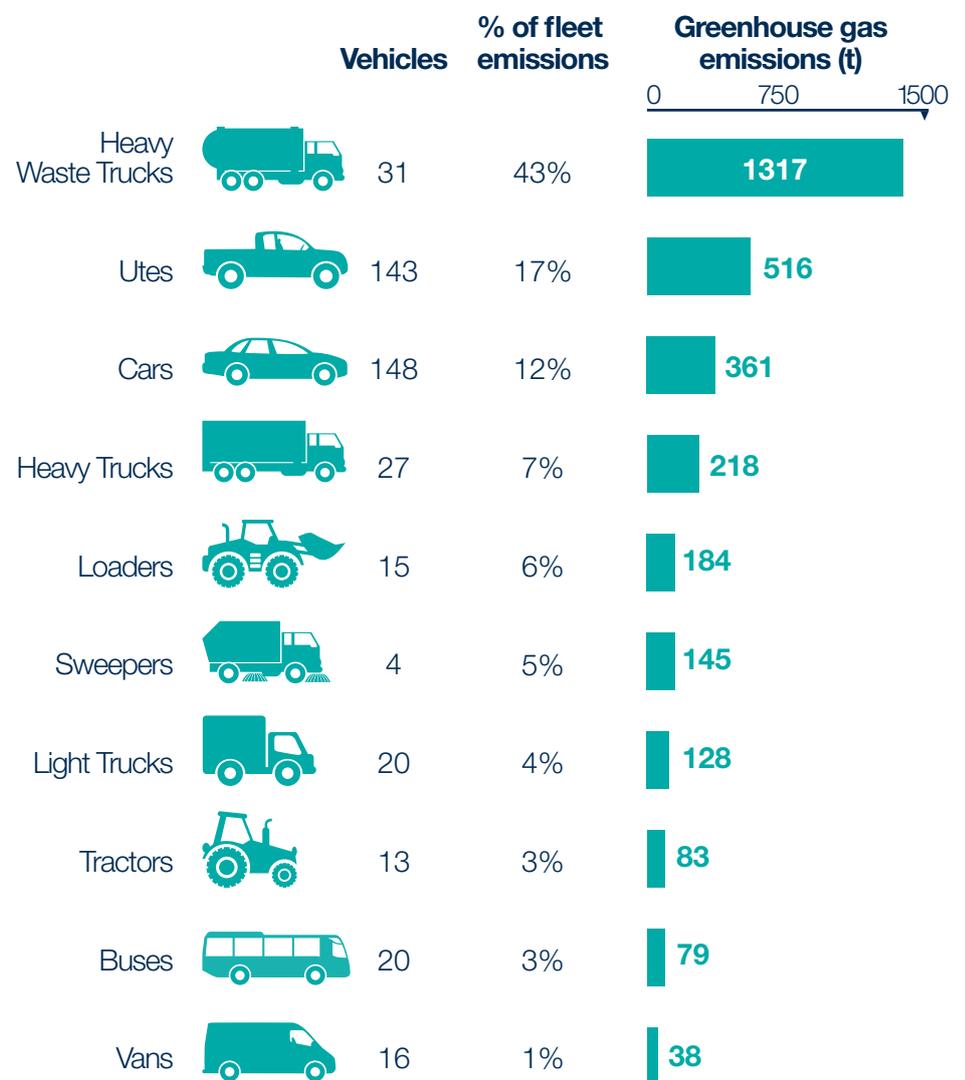
Fleet contribution to City's greenhouse gas emissions 2013/14



Our Fleet Emissions Profile

The chart below shows the breakdown of fleet emissions for the City vehicle fleet calculated over the 2013/14 financial year.

Top Ten List of Fleet Vehicle Class Emissions for 2013/14



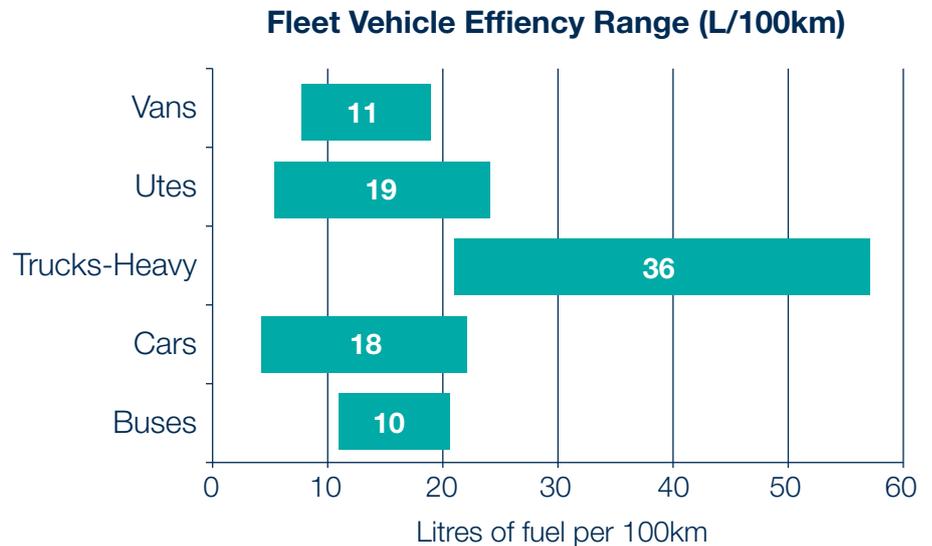
The chart lists the top ten vehicle contributors to greenhouse gas emissions. The largest contributors are the waste collection and processing trucks (43%), utes (17%), cars (12%), other heavy trucks (7%) loaders (6%) and sweepers (5%).

Fuel Efficiency Of Our Fleet Vehicles

Fleet vehicles use fuel as an energy source. Logically, fuel consumption of the vehicle directly affects greenhouse gas emissions. The chart below shows the efficiency range for vehicles within our fleet (litres per 100km).

It can be seen that there is a large range in fuel efficiency in all vehicle classes. For example, utes (2nd highest emissions) have a wide fuel efficiency range of 19L/100km, with a minimum of 5L/100km and a maximum of 24L/100km. Similarly, Cars (3rd highest emissions) have a 18L/100km fuel efficiency range, and Heavy Trucks (4th Highest emissions) have a 36L/100km fuel efficiency range.

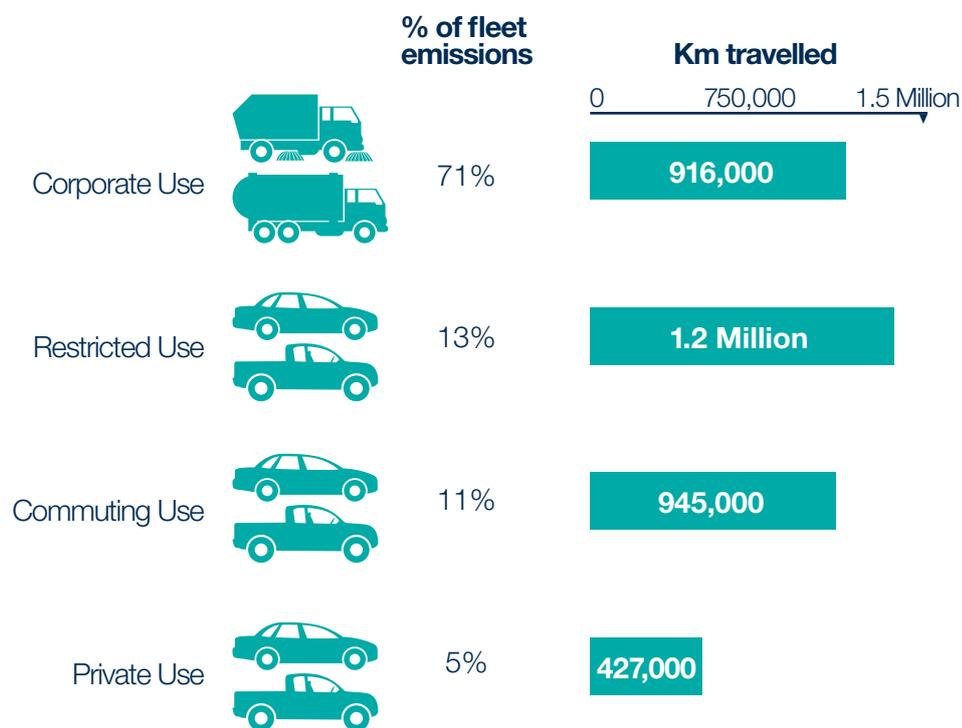
What this demonstrates is the range of fuel consumed dependant on the manner in which the vehicle is operated or driven. Fuel efficiency can be a measure of performance. It represents an opportunity. By reviewing driver behaviour and benchmarking fuel consumption for various operational tasks, we can implement suitable actions to improve fuel efficiency and reduce greenhouse gas emissions.



Fleet Utilisation

Fleet vehicle usage can be classified as corporate, restricted, commuting and private. The chart below shows that 71% of fleet's emissions are due to direct corporate use providing services to the City's residents.

Vehicle Usage in 2013/14



Understanding and reviewing utilisation, classification and configuration will enable us to develop a fleet which best meets our future demands. The City requires a considered approach to fleet management and the plan outlines actions to establish policy intent, to guide procurement, to optimise fleet configuration and to consider effective operational changes (driver behaviour etc) to reduce emissions.

Goals & Objectives

This Fleet Emissions Reduction Action Plan sets the following goals and objectives as a structure for action.

Goal:

Aspiration Goal: Zero emissions generated from the vehicle fleet.

Progress Indicator: Fleet CO₂-e emissions reduced to 3,000 tonnes per year (25% reduction) by 2020.

Objective 1

The City researches the optimum configuration of fleet vehicles and support services that would produce the least emissions.

Actions within this objective explore opportunities to move the City towards zero fleet emissions. The City will review its current fleet configuration including an audit of business units travel needs and requirements, vehicle allocations to staff, and current usage of fleet vehicles. This information will provide the foundation for determining optimum fleet configuration, the structure of an effective pool vehicle system and opportunities to reduce the numbers of vehicles purchased.

As an outcome of these actions the City can make informed decisions on the feasibility of a central car pool having LEV or EV vehicles included as part of the vehicle offering (with associated charging requirements being provided). A business case will need to support the inclusion of zero emission vehicles (ZEV), low emission vehicles (LEV) and electric vehicles (EV) including electric bikes into the City's fleet. The capacity to use low emission fuels and renewable fuels will also be investigated for current and future fleet vehicles.

Goals & Objectives

continued

Objective 2

The City leads by example in sustainable fleet management

Local Governments are leading the Sustainability agenda and communities are looking for different ways to engage in this space. The City must look to innovate and lead by example and there is a great opportunity to do so through sustainable procurement and management indicators of fleet performance. The City can set a policy framework, establish key criteria to drive procurement outcomes and set targets to maintain focus on this key responsibility.

Reporting of the City's carbon footprint and more specifically its efforts to reduce its fleet's greenhouse gas emissions will provide tangible indicators of its success or failure to lead with this initiative. A key outcome of this plan will be improved sustainability reporting, analysis and more targeted information to improve our decision making going forward.

Our Action Plan does seek to offset emissions (through the purchase of carbon offsets) once all possible actions have been implemented to achieve our zero emission target. Whilst it is an important part of our strategy, carbon offsets are seen as the last line of action rather than the first as they can discourage innovation.

Objective 3

The City supports and enables behaviours that reduce fleet emissions

The City of Stirling has a great resource in its people and they remain one of our greatest assets to deliver tangible outcomes in the sustainability area. This plan has demonstrated the many actions that will rely on the engagement and participation of our officers. We must inspire them, we must engage them, we must teach and we must support their endeavours if we are to succeed in achieving our targets.

We have already achieved so much under the Travelsmart banner. We need to leverage the learnings from this initiative and continue to invest in programs that can change peoples' behaviour.

#	Action	Description	Responsible Division	Measurable Outcome	Completed by
Objective 1: The City researches the optimum configuration of fleet vehicles and support services that would produce the least emissions					
1	Review and report on current fleet configuration and its use	Review and report on fleet configuration, business units travel needs and requirements, vehicle allocations to staff, and current usage of fleet vehicles.	Fleet	Report provided to Executive Team	June 2016
2	Produce a feasibility study on a centralised pool vehicle system for identified facilities	Develop an Effective Pool Vehicle System for use by staff to reduce the demand on purchasing new vehicles. Feasibility of central car pool, charging requirements if EV are proposed, booking system and garaging requirements.	Fleet	Report provided to Executive Team	June 2016
3	Prepare business case for the inclusion of low emission vehicles, electric vehicles and electric bikes into fleet.	Review options such as LPG, CNG, Hydrogen, LEV, EV, Hybrids and efficient diesel engines. Assess WOL costs and fuel substitution. Vehicles to include Heavy waste trucks, heavy trucks, utes and cars. Charging stations requirements for EV and electric bikes.	Sustainability	Report provided to Director Infrastructure	December 2015
4	Investigate fuel substitution and renewable fuels for fleet vehicles	Investigate and report on potential strategies to use low emission fuel sources and renewable fuels in the vehicle fleet.	Sustainability	Report provided to Director Infrastructure	December 2015
5	Investigate corporate carshare scheme	Investigate corporate carshare system to share Council vehicles as part of salary packaging arrangements.	Fleet	Report provided to Director Infrastructure	June 2016
6	Review vehicle replacement timeframes	Provide a report on alternative vehicle replacement timeframes in order to increase the replacement rate of inefficient vehicles.	Fleet	Report provided to Director Infrastructure	December 2015
7	Report on the optimum configuration, management and usage of the City's fleet	Report on optimum configuration of fleet	Fleet	Report provided to Executive Team	June 2016

#	Action	Description	Responsible Division	Measurable Outcome	Completed by
Objective 2: The City leads by example in sustainable fleet management					
8	Review and revise vehicle procurement process to consider Sustainability Factors	Incorporate safety, air quality, greenhouse gas emission criteria into vehicle evaluation process.	Sustainability	Director Approval	December 2015
9	Revise the collection and storage of fleet data to improve sustainability reporting	Implement drop down lists for vehicle categories. Transportation function classification detailed for each vehicle. Fleet codes reviewed and revised. Mileage or hourly data collected for sweepers and loaders. Manufacturer fuel consumption detailed for all relevant vehicles.	Fleet	Report to Director Infrastructure showing all revisions completed	December 2015
10	Review and develop Fleet Policy	Develop fleet policy which sets procurement standards and considers how this may integrate with the fleet management practice when considering new fleet items.	Fleet	Draft policy prepared	December 2015
11	Revise Fleet Management Practice	Revise current content in relation to reducing environment footprint and the allocation of vehicles.	Fleet	Management Practice is approved	December 2015
12	Develop new staff vehicle selection list and review annually	Develop new staff vehicle selection list that takes sustainability factors into consideration.	Fleet	Executive Approval	Annually
13	Implement annual engine emissions reduction tune up for heavy vehicles	Implement annual scheduling for engine tune ups for all heavy vehicles to ensure efficiency and reduced emissions.	Fleet	All heavy vehicles have had tune up in the financial year	June 2016
14	Purchase fleet offsets for unavoidable emissions	Purchase fleet offsets for emissions that cannot be avoided through innovation.	Sustainability	Carbon Offsets purchased	June 2020
15	Fleet energy efficiency, Greenhouse Gas Emissions and air quality figures detailed in Annual Reports	Annual fleet emissions reported through yearly reports. Report provided detailing the range of fuel efficiencies for all vehicle classes, with comparisons against manufacturer estimates.	Sustainability	Annual Report distributed. Energy Efficiency report submitted to Executive Team	Annually

#	Action	Description	Responsible Division	Measurable Outcome	Completed by
Objective 3: The City supports and enables behaviours that reduce fleet emissions					
16	Annual sustainable transport and 'End of Trip' facilities audit of the City's workplaces	Audit the provision of end of trip facilities, secure bike parking, showers, lockers, smart rider access and facilities for virtual meetings. Provide recommendations for actions.	Sustainability	Annual audit provided to Executive Team	December 2015
17	Produce report on the feasibility of alternative salary packages as a Vehicle Offset Allowance	Investigate the opportunity to provide alternative salary packages that are considered to be of value to employees. For example opportunities for corporate carshare, free public transport and bike allocation	Sustainability	Report provided to Executive Team	June 2016
18	Implement recommendations from sustainable transport audit	Budget for and implement recommendations from sustainable transport audit of the City's workplaces	City Building	Recommendations implemented	June 2017
19	Offer Eco Driver Training to heavy vehicle drivers	Training offered for operators of all vehicles to reduce emissions and maximise fuel efficiency. A suitable course would be Clean Run EcoDrive which is delivered by the Department of Environment Regulation in Western Australia	Fleet	All operators have completed training	June 2016
20	Undertake electric bike trial	Include an electric bike into fleet and assess its usage for business travel	Fleet	Bike purchased and assessment report provided	June 2016
21	Continue to provide corporate Smart Riders at Administration building	Continue to make corporate smart riders available for meeting commutes into the City.	Sustainability	Smart Rider usage reported	Ongoing
22	Continue to maintain Travelsmart Maps	Review and update travelsmart maps on a three year cycle	Sustainability	Updated maps produced and distributed	Ongoing



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