Australian Government

Carbon Neutral Program

Public Disclosure Summary

Moreland City Council

An Australian Government Initiative

THIS DOCUMENT WILL BE MADE PUBLICLY AVAILABLE

COMPANY NAME: Moreland City Council

REPORTING PERIOD: 1/7/2016 to 30/6/2017

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

Signature	Date 17/10/17.
Name of Signatory: Sue Vujcevic	
Position of Signatory: Manager City Strategy and Design	

Carbon neutral certification category	Organisation
Date of most recent external verification/audit	12 September 2016
Auditor	SGS Australia Pty Ltd
Auditor assurance statement link	

Australian Government

Department of the Environment and Energy

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1. Carbon neutral information

1A. Introduction

Moreland City Council is certified carbon neutral for its organisational corporate emissions. Moreland City Council works hard to continually reduce our emissions through our Corporate Carbon Reduction Plan. To be certified carbon neutral, Moreland City Council must also measure and offset all remaining emissions.

City of Moreland

The City of Moreland covers the inner and mid-northern suburbs of Melbourne. It lies between 4 and 14km north of central Melbourne and covers a diverse range of communities. Centrally located on the northern doorstep of Melbourne's CBD, Moreland is undergoing a sustained period of urban regeneration. Moreland has housing choices ranging from restored heritage cottages, modern family homes and stylish inner-urban apartments to recycled industrial buildings.

Moreland's population of 172,816 is forecast to grow to 214,320 by 2036. Significant growth has occurred in the last five years (the biggest increase for two decades). The City of Moreland covers the suburbs of Brunswick, Brunswick East, Brunswick West, Pascoe Vale, Pascoe Vale South, Coburg, Coburg North, Hadfield, Fawkner, Glenroy, Oak Park and Gowanbrae. Small sections of the suburbs of Fitzroy North and Tullamarine are also located in the City.

Key features of Moreland's regional context include:
- Proximity to Melbourne's Central Business District (CBD); and
- Good transport links to the CBD, ports, airport and industrial areas.

Moreland City Council

Moreland City Council (Council) provides services to the community within the City of Moreland. Council provides these services through our buildings and facilities (see below), fleet, in-house waste collection services as well as the use of contractors for waste collection services and the provision of public (street) lighting. These services are the primary business activities that result in carbon emissions.

Moreland City Council currently has over 300 buildings within its portfolio including civic centres, aquatic and sports leisure centres, community centres, pavilions, maternal/child care centres, kindergartens, libraries and depots, as well as other facilities including public lighting and parks and reserves. The majority of these buildings/facilities are used by Council; however some are leased by a third party. Council also leases some third party buildings/facilities to provide various community services.

This inventory has been prepared based on National Carbon Offset Standard (NCOS). It is aligned with the National Greenhouse and Energy Reporting Act 2007 (NGER Act), as well as the Greenhouse Gas Protocol's Corporate Accounting and Reporting Standard.

In this submission, the following greenhouse gases are considered:
- carbon dioxide
- methane
- nitrous dioxide
- synthetic gases (R22, R507, R134a, R407C, R410a, HFC-134a, SF6)

Boundary overview

In 2012 Council established its emissions boundary for the entire organisation, based on the GHG Protocol's *Corporate Accounting and Reporting Standard*, Carbon Neutral Guidelines, and *AS ISO 14064.1-2006*. Council included emission sources in its organisational boundary, based on operational control approach for measuring and reporting on Council's emissions.

Operational control was defined in accordance with the National Greenhouse and Energy Reporting Act as whether Council:
- was paying the utility costs for the facility

- had the ability to set operating policies, health and safety policies and environmental policies

Operational control was assessed at all Council facilities and buildings which included:
- Council owned and operated facilities
- Council facilities leased out to third party
- Facilities Council leased from a third party

An analysis of Council's building stock confirmed that all sites that are owned and operated by Council or are leased from third parties and operated by Council are under Council's control. Sites where Council facilities were leased to third parties were considered to be under Council's operational control only where Council was paying the utility costs. The operational boundary is depicted in Figures 1 and 2.

1B. Emission sources within certification boundary

Quantified sources

The direct and indirect emissions included in the boundary of this inventory are as follows:

Scope 1 emissions
- Transport Fuels
- Natural Gas
- Stationary Fuels
- Fugitive Emissions (Refrigerants)
- Lubricants

Scope 2 emissions
- Electricity: grid electricity from facilities where Council has financial and operational control (buildings, public/minor and unmetered lighting) and all unidentified electricity accounts (0 out of 193 accounts).

Scope 3 emissions
- Street Lighting
- Contractor Fuels
- Water
- Electricity: transmission & distribution losses associated with electricity purchased by Council (excluding street lighting)
- Electricity: grid electricity from facilities where Council does not have operational control but has financial control (including unmetered lighting)
- Transport Fuels: emissions associated with the extraction, production, and transportation of fuels
- Natural gas: emissions associated with the extraction, production and distribution of natural gas
- Natural gas: facilities where Council does not have operational control but pays bill
- Waste disposal
- Stationary fuels: emissions associated with the extraction, production, and transportation of fuels
- Employee business travel (public transport, flights, hire cars, taxis)
- Paper consumption
- Lubricants: emissions associated with the extraction, production, and transportation of lubricants
- Accommodation
- Asphalt

Non-quantified sources

Emissions not quantified
The Carbon Neutral Guidelines lists activities recommended or to be considered for inclusion in the inventory. Where they have been excluded this is generally due to two factors:
- Council does not have any emissions associated with the activity

- There is a lack of reliable data or methodology to quantify the emissions and to quantify the data and is difficult to gather relative to the expected emissions.

The following emissions sources that have been excluded from the final inventory:

Emission Source	Scope	Justification for exclusion & overall implications for footprint
Some outdoor events	3	• Lack of complete and reliable data. • Implication for footprint would be minor.
Staff commute	3	• Lack of complete and reliable data. Could consider future inclusion if based on very limited sample data. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions.
Contractor energy	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Council also have limited ability to influence these emissions, and limited resources to collect this information. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions.
Construction/demolition activities	3	• Lack of complete and reliable data. Overall implication for footprint is difficult to judge, although could be a substantial source of scope 3 emissions.
Embodied emissions of purchased products and services, i.e. IT equipment, chlorine, office printing, telecommunications, stationery, food and catering, cleaning services	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Council also have limited ability to influence these emissions, and limited resources to collect this information. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions.
Transport emissions from purchased products and materials i.e. postage, couriers, freight	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Council also have limited ability to influence these emissions, and limited resources to collect this information. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions.

Emissions outside of the inventory boundary

All emissions not listed above are outside of the boundary of this inventory. A specific example of this is domestic waste from the community in the form of emissions from waste disposal to landfill from domestic kerbside waste. Whilst the emissions from Council operations and contractors to collect the waste is considered within the inventory boundary, the emissions from community waste disposal to landfill is not considered to be Council's responsibility as Council has no operational control over this action.

Similarly, emissions generated by the community or businesses located within the Moreland municipality are also excluded from this inventory, as are emissions generated by Council employees commuting to/from work at Council.

1C. Diagram of the certification boundary

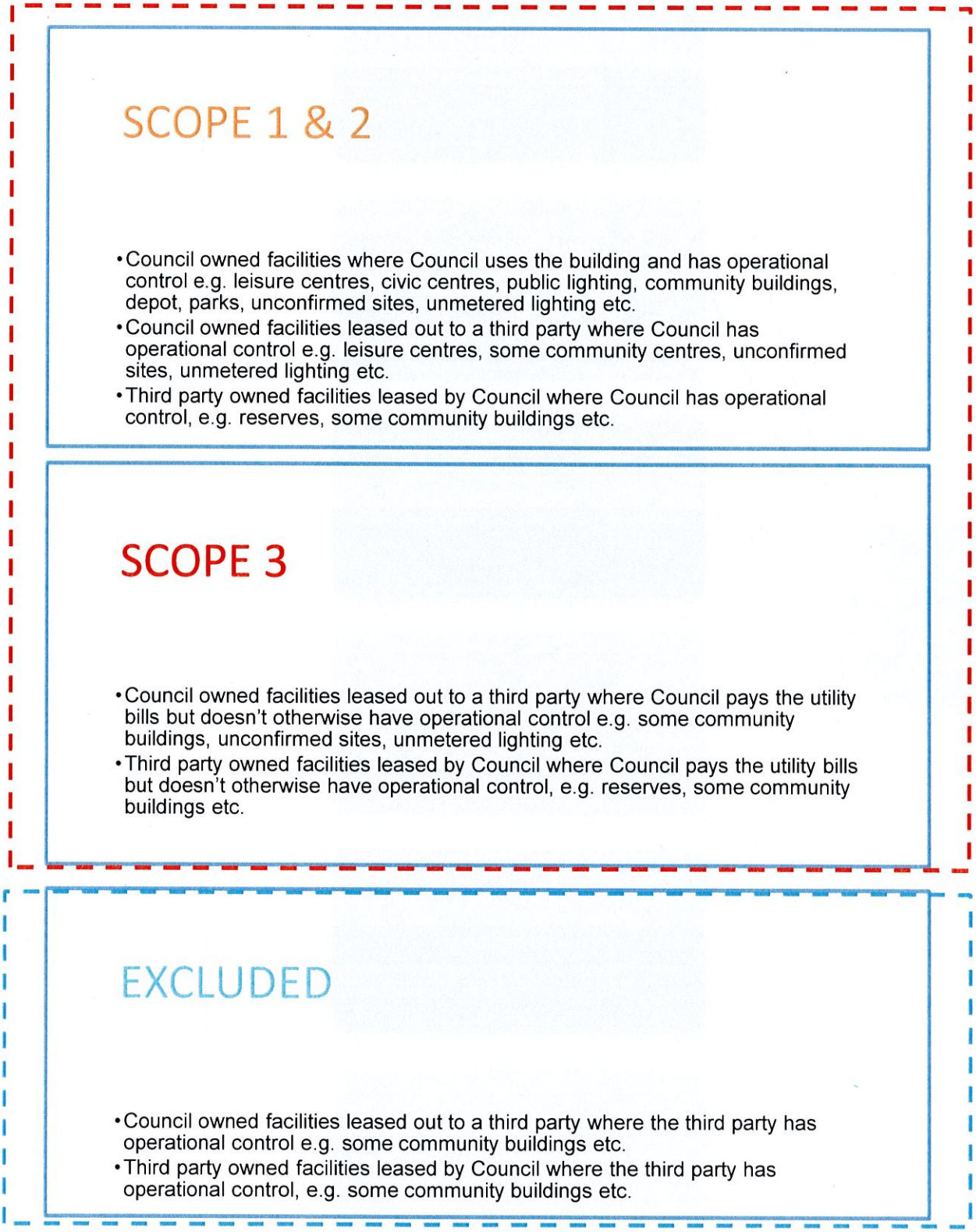

Figure 1: Diagram of the Boundary of the Subject of Certification

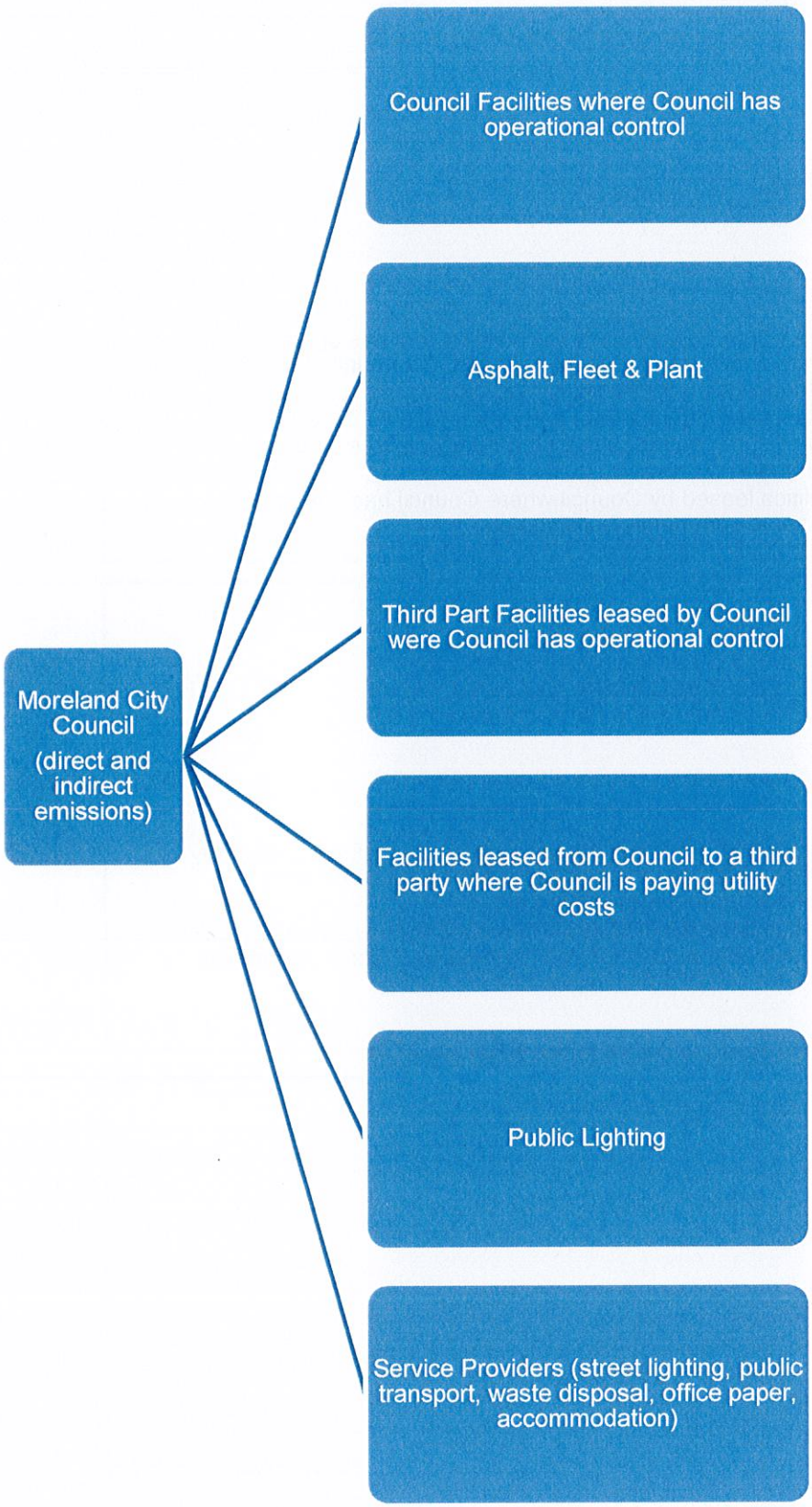

Figure 2: Diagram of emission sources

2. Emissions reduction measures

2A. Emissions over time

Table 1 below shows the emission sources by scope and compares the percentage change in emissions of the current reporting year against previous reporting years. Emissions in 2016/17 fell 13% compared to 2015/16, which was a significant decrease reflecting a reduction in consumption, given that the accounts factors for most categories are comparable between the two periods. Factors contributing to the year-to-year reduction were:

- Updates to the National Greenhouse Accounts Factors as published by the Department of Environment in July 2017
- Improvement in data quality
- Organisational behaviour change
- Reductions due to installation of street lighting upgrades, solar PV and other energy efficiency upgrades

Scope 1 emissions largely remained flat with a decrease of 1%. There was a significant increase in the use of stationary fuels (+31%) but this was offset by a significant decrease in lubricant (-36%) usage.

Scope 2 emissions decreased slightly, by 4%.

Emissions reported this year decreased due to a decrease in electricity consumption and due to a small change in emissions factor as provided in the National Greenhouse Accounts Factors – July 2017. For scope 2 emissions there was a slight decrease from 1.19 kg/CO2-e (scope 2 + scope 3 emissions) to 1.17 kg/CO2-e. This and the actions detailed in Table 2 below explains the drop in emissions by 4%.

Scope 3 emissions decreased significantly this year, by 25%.

The biggest contributing factors were:

- Changing of streetlights to LED significantly decreased electricity consumption resulting in a 37% decrease in these emissions. Street lighting made up 22% of the total carbon profile. The streetlight upgrade program started in the 14/15 period, so that reductions have been cumulative over past years resulting in a decrease of over 50% in 2016/17 emissions compared to 2013/14.
- Electricity scope 3 emissions decreased due to solar PV and other energy efficiency upgrades.
- A reduction of contractor fuels, by 6%, with contractor fuels making up 11% of the total profile.

There were other significant improvements within Scope 3, that have a smaller impact on the overall carbon profile, that are due to behavioural change and operational factors within Council. These include:

- A 15% decrease in emissions from waste disposal,
- A 36% reduction in emissions from office paper,
- A 68% decrease in emissions from flights,
- A 57% decrease in emissions from electricity (no operational control),
- A 41% decrease in emissions from asphalt.

There were a number of sectors that increased, with the largest being a 123% increase in emissions from hire cars and taxis. This was largely due to emissions stemming from much higher usage of hire cars (unleaded petrol). However, this category makes a small contribution to the overall total.

Table 1: Emissions since base year

GHG Source	GHG Emissions (tCO2-e) 2016-17	Proportion of total Inventory	GHG Emissions (tCO2-e) 2015-16	% Change 16-17 vs 15-16	GHG Emissions (tCO2-e) 2014-15	% Change 16-17 vs 14-15	GHG Emissions (tCO2-e) 2013-14	% Change 16-17 vs 13-14	GHG Emissions (tCO2-e) 2012-13	% Change 16-17 vs 12-13	GHG Emissions (tCO2-e) 2011-12	% Change 16-17 vs 11-12
Scope 1 Emissions												
Transport Fuels	2,084.69	13%	2,059.04	1%	2,280.80	-9%	2,101.32	-1%	1,933.68	8%	2,606.00	-20%
Natural Gas	1,821.38	12%	1,816.09	0%	1,954.82	-7%	2,075.89	-12%	924.28	97%	1,561.00	17%
Stationary Fuels	44.34	0.29%	33.80	31%	35.87	24%	57.27	-23%	214.92	-79%	635.00	-93%
Fugitive Emissions (Refrigerants)	80.85	0.52%	94.44	-14%	95.74	-16%	99.71	-19%	127.54	-37%	162.51	-50%
Lubricants	0.95	0.01%	1.49	-36%	1.29	-26%	2.36	-60%	2.98	-68%	5.19	-82%
Total Scope 1 Emissions	**4,032.22**	**26%**	**4,004.86**	**1%**	**4,368.52**	**-8%**	**4,336.56**	**-7%**	**3,203.39**	**26%**	**4,969.70**	**-19%**
Scope 2 Emissions												
Electricity	4,893.52	32%	5,079.75	-4%	5,344.16	-8%	5,467.20	-10%	5,184.74	-6%	5,879.00	-17%
Total Scope 2 Emissions	**4,893.52**	**32%**	**5,079.75**	**-4%**	**5,344.16**	**-8%**	**5,467.20**	**-10%**	**5,184.74**	**-6%**	**5,879.00**	**-17%**
Scope 3 Emissions												
Street Lighting	3,249.54	21%	5,171.61	-37%	6,527.94	-50%	7,053.23	-54%	7,354.30	-56%	7,197.23	-55%
Contractor Fuels	1,591.68	10%	1,689.63	-6%	1,607.12	-1%	1,623.03	-2%	1,631.33	-2%	1,634.24	-3%
Water	619.07	4%	608.81	2%	546.55	13%	496.59	25%	879.63	-30%	351.13	76%
Electricity (Scope 3 emissions)	407.79	3%	466.03	-12%	614.82	-34%	694.98	-41%	664.71	-39%	734.90	-45%
Electricity (No Op ctl)	288.75	1.86%	336.13	-14%	420.59	-31%	412.69	-30%	251.81	15%	27.52	949%
Transport Fuels	107.14	0.69%	106.00	1%	117.27	-9%	160.94	-33%	147.94	-28%	200.00	-46%

Table 1: Emissions since base year

GHG Source	GHG Emissions (tCO2-e) 2016-17	Proportion of total Inventory	GHG Emissions (tCO2-e) 2015-16	% Change 16-17 vs 15-16	GHG Emissions (tCO2-e) 2014-15	% Change 16-17 vs 14-15	GHG Emissions (tCO2-e) 2013-14	% Change 16-17 vs 13-14	GHG Emissions (tCO2-e) 2012-13	% Change 16-17 vs 12-13	GHG Emissions (tCO2-e) 2011-12	% Change 16-17 vs 11-12
Natural Gas (Scope 3 emissions)	137.85	0.89%	137.45	0%	147.95	-7%	157.72	-13%	70.23	96%	122.00	13%
Waste Disposal	23.13	0.15%	27.08	-15%	32.85	-30%	52.40	-56%	51.58	-55%	29.28	-21%
Stationary Fuels	2.27	0.01%	1.80	26%	1.90	19%	4.52	-50%	16.95	-87%	48.00	-95%
Flights	1.32	0.01%	4.12	-68%	5.68	-77%	16.62	-92%	12.86	-90%	18.80	-93%
Natural Gas (No Op ctl)	2.87	0.02%	2.58	12%	3.30	-13%	3.18	-10%	5.07	-43%	-	0%
Hire Cars and Taxis	7.13	0.05%	3.17	125%	5.25	36%	1.94	267%	4.28	67%	11.42	-38%
Office Paper	14.77	0.10%	23.09	-36%	23.26	-36%	1.14	1194%	1.03	1339%	25.87	-43%
Public Transport	1.88	0.01%	1.98	-5%	2.07	-9%	1.90	-1%	1.28	47%	2.57	-27%
Lubricants	0.27	0.00%	0.47	-44%	0.40	-34%	0.45	-41%	0.57	-53%	0.80	-67%
Asphalt	120.10	0.77%	202.61	-41%	NR *	NR *	NR *	NR *	NR *	NR *	NR *	NR *
Accommodation	1.82	0.01%	2.22	-18%	NR *	NR *	NR *	NR *	NR *	NR *	NR *	NR *
Total Scope 3 Emissions	**6,577.37**	**42%**	**8,784.79**	**-25%**	**10,056.94**	**-35%**	**10,681.35**	**-38%**	**11,092.99**	**-41%**	**10,403.75**	**-37%**
Total Emissions	**15,503.11**	**100%**	**17,869.41**	**-13%**	**19,769.63**	**-22%**	**20,485.10**	**-24%**	**19,481.12**	**-20%**	**21,252.46**	**-27%**

*NR - Not recorded

2B. Emissions reduction strategy

Climate Action Plan / Carbon Management Strategy / Corporate Carbon Reduction Plan

In April 2007, Council endorsed the Climate Action Plan, which included a commitment to the goal of zero net emissions for Council's corporate emissions by 2020 and the goal of zero net emissions for the Moreland community by 2030. In December 2008, the incoming Mayor's speech took the corporate goal further to state that Council would achieve zero net emissions by 2012. To respond to this direction, Council developed a Carbon Management Strategy (CMS) that provided a pathway for Council to meet its commitment of carbon neutrality for Council's corporate operations by 2012. The CMS brought together the Climate Action Plan, the Building Operating Plan and the Sustainable Buildings Program and included a strategic energy efficiency program to provide a road map to move forward in a positive direction towards zero net emissions by 2012. Council delivered on its promise of zero net emissions by 2012 by achieving carbon neutral certification under the National Carbon Offset Standard (NCOS).

In June 2015, Council endorsed an update of the CMS - The Corporate Carbon Reduction Plan (CCRP) sets out Council's on-going actions to decrease corporate carbon emissions through to 2020 and sets the foundations for action beyond this time whilst maintaining carbon neutral accreditation under NCOS. The CCRP includes actions to directly reduce emissions associated with Council's operations and actions to influence and encourage others such as Council's service providers to reduce emissions associated with their operations. The key objectives of the CCRP are to:

- Maintain Council's carbon neutral certification.
- Provide leadership to the local government sector and the Moreland community of the urgent need to tackle climate change.
- Deliver a clear business case for action.
- Ensure that projects are planned, delivered and reviewed regularly to deliver clear outcomes.

Corporate Carbon Reduction Plan Energy Efficiency Implementation

CCRP capital works undertaken in 2016-17 have largely focused on an update of Council streetlights to energy-efficient LED technology.

From the 2011-12 reporting period to the current 2016-17 results, Council has reduced annual emissions by approximately 27% or 5,749 tCO2-e. This includes reductions since the base year in almost all categories, excluding Natural Gas Scope 1 and 3, Water, and Electricity (no operational control,) with improved reporting structures likely to be responsible for some of the apparent gains in these three categories.

This result is testament to Council's strategic approach of continual monitoring and improvement. It reflects ongoing energy efficiency works undertaken at all council buildings, as well as behavioural modifiations and procurement policies.

To manage its commitment to reducing emissions and maintaining its carbon neutral status, Council will continue to take a strategic approach, guided by the CCRP to mitigating its carbon impact. Investment in energy efficiency is critical to directly reducing greenhouse emissions, reducing Council's exposure to energy price rises, carbon prices and the costs associated with achieving carbon neutrality. Council will also continue to progress data management to identify savings and to help direct energy efficiency projects.

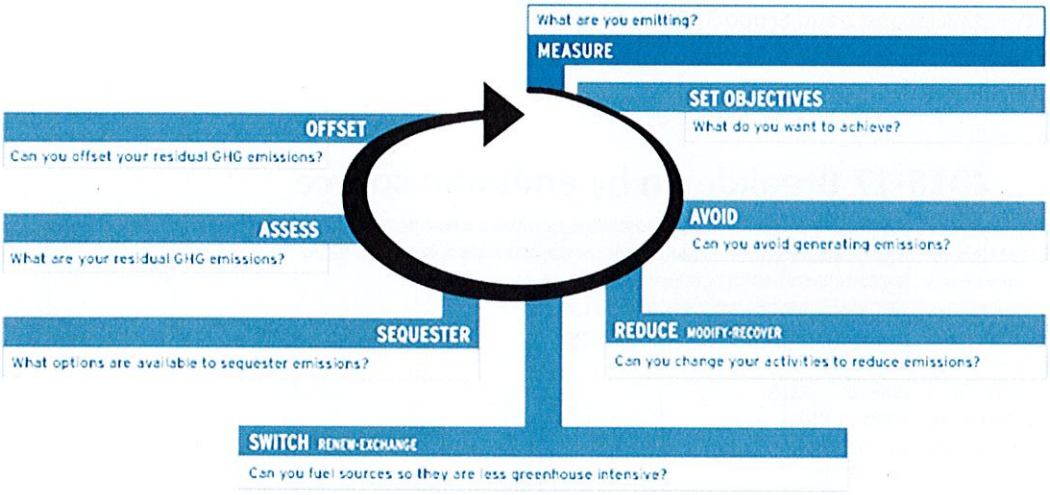

Figure 3: Carbon Management Principles (source: http://www.epa.vic.gov.au/business-and-industry/lower-your-impact/carbon-management-at-work)

Using steps in the Carbon Management Principles (refer Figure 3 above). Council has identified and recommended actions by which the organisation can reduce its greenhouse emissions. These are outlined in the following sections.

Measure

Data Management

Employing Council's Utility Data Management Officer and improving data management saved Council over $100,000 in energy bill errors in the first 12 months of implementation. These savings would have been missed were it not for the proactive approach recommended in the CMS. Further, measuring utility data is a crucial step towards carbon neutrality as Council has a much better understanding of:

- Opportunities for emissions reduction
- The impact of energy efficiency measures and facility use on emissions
- The investment required for energy efficiency and carbon offsets for forward planning

The data management system has been upgraded to a more rigorous system integrated within Council's financial system. This data management system will provide more rigorous quality assurance, improved reporting and best use of the resources available to Council.

Avoid

- Council has a thermal comfort policy ensuring our buildings are heated and cooled as effectively as possible, infrared sensors and signage on lights to encourage people to switch off when rooms are not in use.
- Incentives such as subsidised annual MYKI tickets and free MYKI for business use to encourage public transport use.
- Interest free loans are available for purchase of bicycles.
- Electric bikes and cars powered by renewable energy available to all staff.
- Council has a Sustainable Buildings Policy ensuring all building projects are subject to best practice energy efficiency minimum standards.
- Council hosted fossil fuel divestment information sessions
- Council installed new recycling and composting bin infrastructure at the Coburg Town Hall and Hadfield Operations Centre

Reduce – Energy Efficiency Projects

Adopting an approach to reduce emissions through energy efficiency projects will minimise the need to purchase carbon offsets and associated long term costs.

As shown in Figure 4 below, the top 3 emission sources for Council in 2016-17 are:

- Buildings - Electricity – 32% (Scope 2 and Scope 3 (Operational control only)).
- Street lighting – 21% (Scope 3)
- Transport fuels – 13% (scope 1)

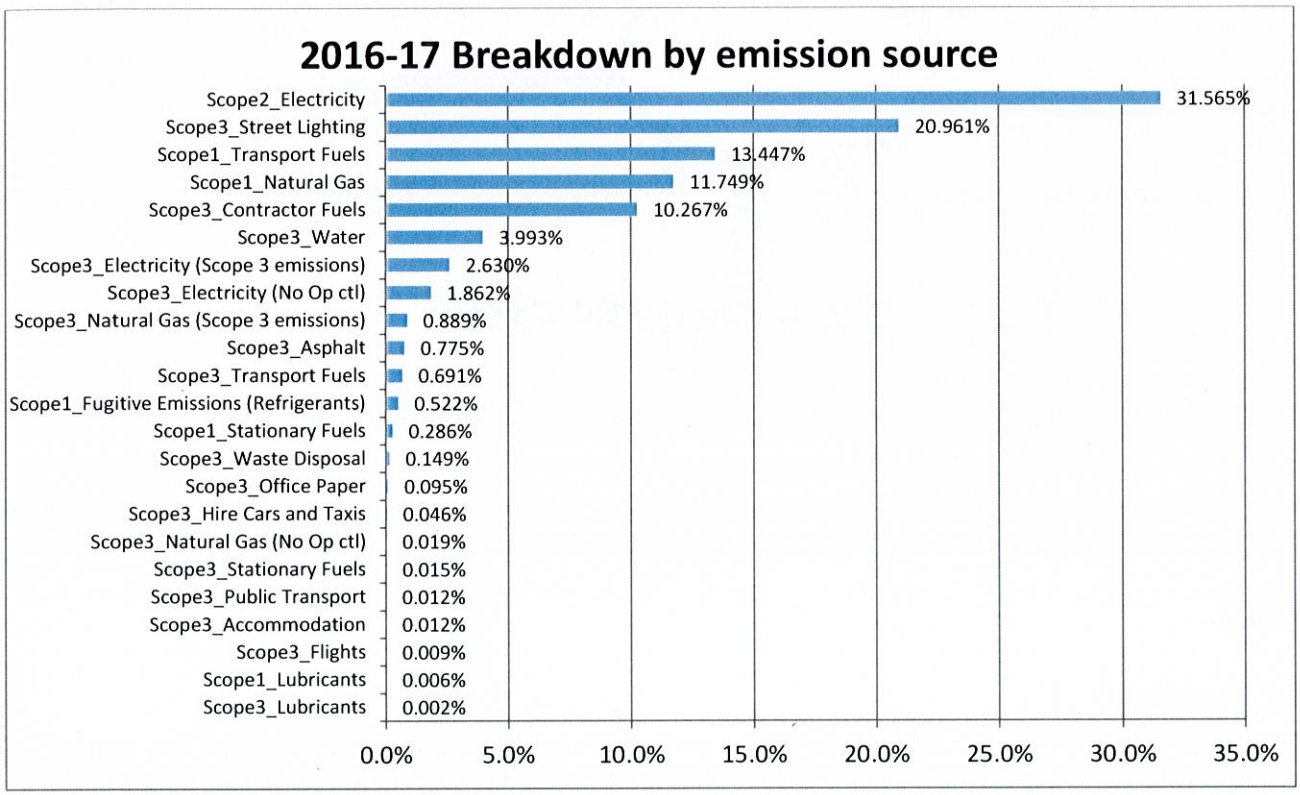

Figure 4: 2016-17 Breakdown by emission source

Around 66% of all emissions result from these top three sources and 32% is due to electricty use. Adopting an approach to achieve ongoing emissions through energy efficiency projects that particularly target these three areas will minimise the need to purchase carbon offsets and associated long-term costs. Opportunities are presented below and have been selected based on integration with capital works projects and on their ability to reduce both energy costs and greenhouse emissions.

Street Lighting

The program to replace 70% of Moreland's street lights (8,000 - 80 watt mercury vapour streetlights) in residential streets with more efficient fittings has already achieved significant reductions for this category. Council will continue to investigate possibilities for further improvements.

Open Space Lighting program

Council will actively upgrade existing mercury vapour lights to LED in parks and open spaces.

Transport

Council's fleet emissions and associated fuel costs have decreased significantly in this period.

- In 2011, the ESD Unit developed a light fleet matrix to assist fleet in the purchasing of the most appropriate vehicles for Council operations. This has resulted in smaller cars being purchased for general pool car use and dedicated LPG vehicles with a lower carbon footprint for larger cars with load carrying requirements.
- In 2011 Council commissioned a feasibility study into the option of converting the heavy fleet vehicles to CNG (Compressed Natural Gas). CNG can deliver 15% greenhouse gas emissions savings along with air quality improvements from fleet operations and reduce operating costs by up to 50%. The report was presented in June 2012 and recommended collaborating with neighbouring Councils to reduce the costs of infrastructure upgrades required to deliver CNG to vehicles. Meetings will be held with neighbour councils to scope potential partnership opportunities. This was still an opportunity for Council in 2014, however a zero emissions solution (hydrogen) is preferred and will be implemented over 2017 to 2020.
- Throughout 2015-16 Moreland worked with the Hydrogen Utility (H2U) and a leading truck manufacturer to develop a renewable hydrogen refuelling station at the Hadfield Operations Centre as well as prototype hydrogen

waste vehicles. The project will be implemented over 2017 to 2020 with plans for 12 of the council's 18 trucks to be zero-emissions by early 2020. In April 2017, the project was successful in securing $1 million in funding from the Victorian State Government.

- In July 2013 Electric Vehicle (EV) charging infrastructure was installed and a Nissan Leaf electric car introduced to Council's pool car fleet.
- Two additional Nissan Leaf electric cars were added to Council's fleet in 2014-15
- One additional EV was added to the fleet in 2015-16; a Renault Kangoo electric van.
- Council intends to purchase two new EV's every year as part of the CCRP, however has been unable to purchase due to vehicles not being available in Australia to buy.

Renewable Energy – Solar

Council undertook a renewable energy feasibility study in 2013-14 for Council owned buildings. The study identified a number of sites where solar PV is viable for installation. In this reporting period, Council installed a total of 14kW on Council owned buildings:

- Bob Hawke Community Centre: Solar PV 14kW

Council also installed three systems at Council buildings leased to the community. Council used an innovative approach where Council paid for the installation and the community group leasing the site repay for the system over a 5-10 year period utilising savings received from reduced energy bills. This Solar on Leased Facilities pilot program saw the following installations:

- Anne Sgro Childcare Centre: 21kW
- Robinson Reserve Neighbourhood House: 7kW
- Brunswick Bowls Club: 20kW

GreenPower

Council currently purchases 100% GreenPower for Coburg Civic Centre.

Melbourne Renewable Energy Project

Throughout 2016-17 Moreland continued to partner in the Melbourne Renewable Energy Project which is a consortium of 13 partners who are intending to stimulate the construction of a renewable energy generation project to provide 100% renewable energy for a period of ten years. The project progressed through the public tender stage and evaluation of submissions, and contract establishment is imminent.

Sequester

This is not directly available to Council as an option.

2C. Emissions reduction actions

Council's emissions for the 2016-17 reporting period is **15,503** tCO2-e. By purchasing GreenPower for Coburg Civic Centre, the net emissions were reduced to **15,341** tCO2-e. Note that energy efficiency upgrades and the installation of additional solar PV at this building reduced consumption at this site significantly, so that much less GreenPower was purchased by Council compared to last period.

The emission reductions achieved during the reporting period can be partly attributed to the following actions:

Table 2: Emissions reduction measures implemented in the current reporting period

Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Reduction t CO_2-e Per annum	Reduction t CO_2-e 2016-17
2016/17	Scope 1 – Transport Fuels	Introduction of a commercial EV van to Coucil's fleet	1	Implemented this period	4	4
2016/17	Scope 2 & 3 – electricity consumption	Bob Hawke Community Centre – PV 14kW	2	Implemented this period	24	0
2016/17	Scope 2 & 3 – electricity consumption	HVAC upgrade at Brunswick Mechanics Institute	2	Implemented this period	25	0
2016/17	Scope 2 & 3 – electricity consumption	HVAC upgrade at Campbel Turnbull Library	2	Implemented this period	20	6
2016/17	Scope 2 & 3 – electricity consumption	Thermal heating/cooling plant upgrade at Coburg Civic Centre	2	Implemented this period	25	15
2016/17	Scope 2 & 3 – electricity consumption	LED light replacement at a number of Council Buildings	2	Implemented this period	4	1
2016/17	Scope 2 & 3 – electricity consumption	Voltage Power Optimisation installed at Brunswick Baths	2	Implemented this period	15	3
2016/17	Scope 3 – electricity consumption	Anne Sgro Childcare Centre – PV 21kW	3	Implemented this period	34	5
2016/17	Scope 3 – electricity consumption	Robinson Reserve Neighbourhood House – PV 7kW	3	Implemented this period	11	3
2016/17	Scope 3 – electricity consumption	Brunswick Bowls Club – PV 20kW	3	Implemented this period	32	0
2016/17	Scope 3 – electricity consumption	LED Streetlight upgrades	3	Implemented this period	3,066	3,066
Total emission reductions implemented in this reporting period					**3,260**	**3,103**

Key strategic emission reduction actions for 2017-18

The following actions are planned for 2017-18:

- Stage 4 Coburg Civic Centre thermal heating plan upgrade
- Thermal boiler upgrade at Fawkner Leisure Centre
- Development and Implementation plan of the hydrogen fleet fuel project
- Installation of Solar PV on leased facilities – 3 childcare centres approximately 43kW
    - Barry Beckett Childcare Centre: 14kW
    - Shirley Robinson Childcare Centre: 18kW
    - Lake Park Kindergarten: 11kW

3. Emissions summary

Table 3: Emissions Summary		
Scope	Emission source	t CO_2-e
1	Transport Fuels	2,084.69
1	Natural Gas	1,821.38
1	Stationary Fuels	44.34
1	Fugitive Emissions (Refrigerants)	80.85
1	Lubricants	0.95
2	Electricity	4893.52
3	Street Lighting	3,249.54
3	Contractor Fuels	1,591.68
3	Water	619.07
3	Electricity (Scope 3 emissions)	407.79
3	Electricity (No operational control)	288.75
3	Transport Fuels	107.14
3	Natural Gas (Scope 3 emissions)	137.85
3	Waste Disposal	23.13
3	Stationary Fuels	2.27
3	Flights	1.32
3	Natural Gas (No operational control)	2.87
3	Hire Cars and Taxis	7.13
3	Office Paper	14.77
3	Public Transport	1.88
3	Lubricants	0.27
3	Asphalt	120.10
3	Accommodation	1.82
Total Gross Emissions		**15,503**
GreenPower or retired LGCs		**162.34**
Total Net Emissions		**15,341**

4. Carbon offsets

4A. Offsets summary

In 2015 Council forward purchased and retired through the APX registry offsets (Table 4) in order to meet Council's NCOS obligations in 2015-16. The surplus from these offsets are used to meet partially Council's NCOS obligations for 2016-17. In 2016 Council forward purchased and retired through the APX registry additional offsets (Table 4) in order to meet Council's NCOS obligations in 2016-17 and voluntary offsets totalling 425 tCO2-e retired on behalf of members of Moreland residents and staff. The table below shows the amount of offsets that were purchased and retired and the associated projects.

Table 4: Offsets Summary

Offset type and registry	Year retired	% purchased and retired for 2016 - 17	Quantity	Serial numbers
Project : Wind Power Project at Rajkot, Gujarat **Location:** Gujarat, India **Offset type:** VCUs **Registry:** APX VCS registry	2015	The project relates to 5 % per cent of the total amount of offsets purchased and retired for this reporting period	**844 tCO2-e** (**844 tCO2-e** on behalf of Council operations)	3801-165544757-165563756-VCU-005-APX-IN-1-1045-29032012-31102012-0
Project : Wind Power Vaspet-II and Vaspet-III Wind Power Project, Maharashtra **Location:** Maharashtra, India **Offset type:** VCUs **Registry:** APX VCS registry	2016	The project relates to 95% per cent of the total amount of offsets purchased and retired for this reporting period	**14,922 tCO2-e** (**14,497 tCO2-e** on behalf of Council operations) (**425 tCO2-e** on behalf of Moreland residents and staff)	4639-191553809-191572808-VCU-008-APX-IN-1-1404-01012014-03082014-0

	Total offsets retired	15,766 15,341 = Council + 425 = staff and community
	Net emissions	0 tCO2-e
	Total offsets held in surplus for future years:	4,078

4B. Offsets purchasing and cancellation strategy

Council seeks to position itself as a carbon neutral organisation and to recognise this through an accreditation process. Accreditation requires the purchase of verified carbon offsets. In June 2012 Council endorsed its Carbon Offset policy which outlines Council's approach and criteria to the purchase of carbon offsets. This policy establishes a framework for purchasing carbon offsets, which includes procurement process and criteria for offset selection.

In July 2012 Council established a panel of preferred suppliers for carbon offsets to ensure that Council can purchase NCOS accredited offsets to meet its carbon neutral commitment. Council confirmed two offset providers as preferred suppliers for the years 2012 to 2015.

In accordance with NCOS guidelines for the purchase of offsets for the years 2015 to 2016, 2016 to 2017 and 2017 to 2018, Council has forward purchased and retired offsets. Any excess offsets will be carried forward to Council's carbon neutral claim in subsquent years. The offset suppliers for the years 2016 – 2017 were selected based on Council's Offset policy criteria through a request for quote process.

4C. Offset projects (Co-benefits)

The selected wind projects contribute to sustainable development in the local community, and India as a whole. The projects help reduce the level of air pollution caused by burning coal, as well as reducing other environmental impacts from extracting and processing fossil fuels. The projects create jobs for local people during construction and with their continued operation.

The Wind power project in Maharashtra is a smaller scale project spread across three villages supplying electricity to area previously without grid power, creating new business opportunities for industries and employment.

5. Use of trade mark

Table 5. Trade mark register

Where used	Logo type
Council's website	Certified organisation
Council's Annual Report	Certified organisation
Council email signatures	Certified organisation
Presentations to other Councils	Certified organisation
Northern Alliance for Greenhouse Action (NAGA) events	Certified organisation
Council presentation banners	Certified organisation
Decals on Council's electric vehicle	Certified organisation
Electronic information Kiosks	Certified organisation
Council Buildings	Certified organisation

6. Have you done more?

Under the CCRP, Council plans to take the following actions beyond the requirements of the NCOS:

- Continue to install solar PV on Council's leased facilities to assist with reducing community emissions and inspire the community to install solar PV in residential dwellings.
- Complete the development and integration of carbon emissions tender questions into Council's procurement process to influence the process and supply chain of Council suppliers.
- Update community grants application forms with questions regarding carbon and other environmental performance of projects and programs being put forward for grant funding.
- Continue to engage and educate staff on sustainability actions they can take in their own time including active transport, reducing organic waste to landfill and divestment from fossil fuels.
- Implement divestment policy to guide Council's approach to reducing carbon emissions associated with Council's Investments (divestment policy being developed in 2015). In addition, Council included a number of questions pertaining to carbon mitigation in our banking services tender process.
- Introduction of a central Utility Billing Management System (Chameleon) including employing a dedicated Data Management Officer to ensure quality and general management of data.
- Work with a consortium to implement the development of a large scale renewable energy project to source all future electricity.
- Work with industry and multiple levels of government to implement a world first pilot of hydrogen refuelling for Council's heavy fleet.