



Town of Cottesloe

2014/2015 Carbon Inventory Report



Reporting period: 1 July 2014 to 30 June 2015

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Summary

This report summarises the findings from the 2014/2015 Greenhouse Gas Inventory recently completed for the Town of Cottesloe. The Inventory and Report represents the sixth consecutive year of carbon accounting for the Town, starting with a baseline from 2009/2010. As the Town aims to become carbon neutral by 2015 (2014/2015 reporting period), annual data collection and reporting is necessary to track progress and highlight areas for carbon abatement. The 2014/20145 inventory calculated 299.71 tonnes of Carbon Dioxide equivalent (CO_{2-e}) emissions from the Town's operations for the period 1 July 2014 to 30 June 2015. This compares to a baseline greenhouse gas footprint of 806 tonnes of CO_{2-e} for 2009/2010. A number of abatement actions as well as recording changes have led to the reduction of over 50% of the total footprint. The primary emissions-related activities at the Town for 2014/2015 were:

- Purchased electricity for Council buildings and infrastructure as well as streetlights;
- Petrol combustion from fleet vehicles for transportation (includes work and private use of vehicles); and
- Council-generated waste sent to landfill.

Paper use and business travel and gas make up the remainder of the emissions calculated in the inventory.

The Town has successfully achieved its goal of a 15% reduction of emissions from the 2009/2010 baseline year as well as being on track to reach the overarching goal of carbon neutrality.

Recommendations for the Town following the completion of the 2014/2015 inventory are as follows:

1. This report be published on the Town's website by April 2016.
2. The Town continually review boundaries set at the baseline year to determine if they are still appropriate.
3. The Town investigate the practicability of offering new staff members a financial increase to their salary package as an alternative to the current practice of automatically providing all senior staff with a vehicle as part of their salary package.
4. The Town encourage the practice of purchasing the voluntary flight offset option for business travel.
5. The Town's staff develop a Carbon Offset Purchasing Policy.
6. The Town investigate and purchase offsets in accordance with the Policy to bring the Town's footprint to zero net emissions in time for the 2015 (2014/2015 reporting period) goal of carbon neutrality.
7. The Town to peruse carbon neutral accreditation through the Department of the Environment's National Carbon Offset Standard Program.

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1. Introduction

The 2014/2015 Carbon Inventory Report has been prepared for the Town of Cottesloe (the Town) to report on council-related greenhouse gas (GHG) emissions for the period from 1 July 2014 to 30 June 2015. This report follows the 2009/2010 (baseline year); 2010/2011; 2011/12; 2012/2013 and 2013/2014 carbon inventory reports. It provides a summary and brief analysis of the carbon inventory recently completed for the same time period.

Due to its small size, the Town is not obligated to report emissions under state or federal legislation, but chooses to voluntarily assess and publicly report its emissions as a part of its commitment to becoming carbon neutral. Monitoring and reporting on emissions is an important step in taking responsibility for the Town's impact on the environment. Continued development of annual inventories and reports assists the Town in understanding their emissions profile.

In 2010, Council unanimously committed to becoming carbon neutral by the target date of 2015 through following the four step process below:

- Step 1** Measure the total GHG footprint at baseline year.
- Step 2** Develop a GHG Reduction Plan to reduce highest emission sources.
- Step 3** Switch to energy sources that create less GHG emissions.
- Step 4** Offset all remaining GHG emissions.

In 2012 the Town developed and published the *Town of Cottesloe Greenhouse Gas Reduction Plan*, which set out a process of carbon abatement (step 2). The Town's approach to becoming carbon neutral involves reducing emissions through least-cost abatement before offsetting any remaining emissions. The plan also established emissions reduction targets including:

- An overall goal of zero net emissions by 2015; and
- A 15% reduction on 2009/2010 emissions by 2015.

A number of abatement actions have been implemented in line with step 3 to reduce the Town's emissions where practical, including the installation of a solar power system at the Civic Centre; a reduction in the number of cars in the Town's fleet; and the implementation of PC power management. The Town also purchased 73 megawatts of Green Power in 2014/2015. The Town is now well positioned to purchase carbon offsets as part of the fourth and final step to becoming a carbon neutral council.

Compilation of this report and inventory involved liaison with management, contractors and staff; sourcing activity data from utility providers; and reviewing invoices. Relevant data was consolidated in the inventory with links to where original data can be accessed. This information is stored securely on the Town's record keeping software. Further information on data access or management can be provided by the Town's Sustainability Officer.

This report has been developed with close reference to the standards for the greenhouse gas emissions reporting set out by the Greenhouse Gas Protocol Revised Edition (GHG Protocol) (WRSO 2004) and the National Carbon Offset Standard (NCOS) (Department of the Environment 2015).

Town of Cottesloe Profile

The Town of Cottesloe is a small coastal local government in the Western Suburbs of Perth. The Town covers a total area of approximately 4 square kilometers with a population of approximately 7500. During 2014/2015, the Town employed approximately 40 staff. The Town has historically operated out of 2 main buildings, with administration at the Cottesloe Civic Centre and the Town's 'Depot' located at 8 Stack Street, Fremantle. Other buildings and facilities operated by the Town include Anderson Pavilion; beach facilities; playgrounds; ovals and a golf course. Additionally the Town has over 700 streetlights within its boundaries and a fleet of approximately 30 vehicles.

Aims

This Report presents the Town's GHG emission sources and total emissions for the period 1 July 2014 to 30 June 2015. Specifically, the report has been developed in order to:

- Present the Town's GHG Inventory as the sixth consecutive year of GHG emissions reporting;
- Demonstrate leadership as a local government through transparency and initiative in carbon management;
- Identify emissions and financial savings opportunities for the Town.

Explanation of Carbon Accounting

The 3 Scopes

'Scopes' are used to categorise direct and indirect emissions. Scopes were introduced by the Greenhouse Gas Protocol to improve carbon accounting transparency and avoid double counting of emissions. The Town's carbon accounting framework includes three scopes. These are defined by the Greenhouse Gas Protocol as:

- Scope 1** Direct GHG emissions occurring as a result of activities that constitute the facility (i.e. the burning of fuel in a vehicle).
- Scope 2** Indirect GHG emissions from energy (e.g. electricity) that is generated off site and then purchased for use by the Town of Cottesloe.
- Scope 3** All other indirect GHG emissions that have been generated as a consequence of the Town of Cottesloe's activities, but occur from sources not owned or operated by the Town. The Town has less control over indirect GHG emissions and they are often harder to quantify, therefore, the Town has elected to report the minimum required emission-related activities as set out in the NCOS standard.

Occasionally the assignment of emissions sources within a particular scope may be revised. For example in 2011/2012 WALGA recommended local governments report purchased electricity for Western Power-owned streetlights as scope 3 instead of scope 2. This led to a significant change in Cottesloe's emissions footprint in that year as emissions relating to street lighting make up a considerable proportion of the Town's emissions.

Calculating Emissions of Different Activities

Different activities result in different levels of emissions. Most activities result in the emission of several GHG such as Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O). Each of these GHG also has a different level of 'global warming potential'. To simplify calculations, different emissions are displayed as a single unit, Carbon Dioxide equivalent (CO₂-e).

In order to calculate a carbon footprint for an activity or an organisation, a unit of measurement for a given activity such as litres of fuel or kWh of electricity is multiplied by a standardised 'emissions factor' to calculate the total quantity of emissions (CO₂-e) for that activity. For example: [Litres of diesel used] x [Emissions factor of diesel use] = [Total emissions from diesel use].

Agreed emissions factors are set out by the Federal Government to ensure consistency in reporting emissions. These figures are often revised in line with improved carbon accounting standards. Changes to emissions factors can result in changes to the total footprint of an organisation. Minor changes to the emissions factor for commercial and industrial waste, increasing from 1.1. to 1.3, has little impact on the overall footprint . While minor, nevertheless, such changes demonstrate the need to remain up to date with the most accurate calculations and clearly state the emissions factors used (see the carbon inventory for more details).

2. Setting Boundaries

Boundary setting is a key step in measuring and managing emissions. Boundaries are determined by ownership or 'operational control' of facilities or infrastructure. Only one corporation or organisation can have operational control over a facility at one time. The Town uses the following definition of 'operational control' to determine its boundaries (DCC, 2010):

"The greatest authority to introduce or implement any or all of the following for the Facility:

- *Operating policies;*
- *Health and safety policies;*
- *Environmental policies."*

The organisational and operational boundaries used to develop the carbon inventory are set out in Figure 1. These were determined at a workshop held in 2009, at commencement of the project. Boundaries set for the 2014/2015 inventory and report are based on those used in the baseline inventory. Emission-related activities included and excluded are detailed in the Appendix. It is important to note that activities included and excluded may change over time as reporting methods improve or relevance is re-assessed. As per guidance from NCOS, it is not necessary to include all emissions, as long as any emissions excluded are clearly identified and selection is justified. As the Town is choosing to voluntarily collect and reduce its emissions the emission footprint is the best attempt to collect all relevant activity data and best reflect the actions of the Town.

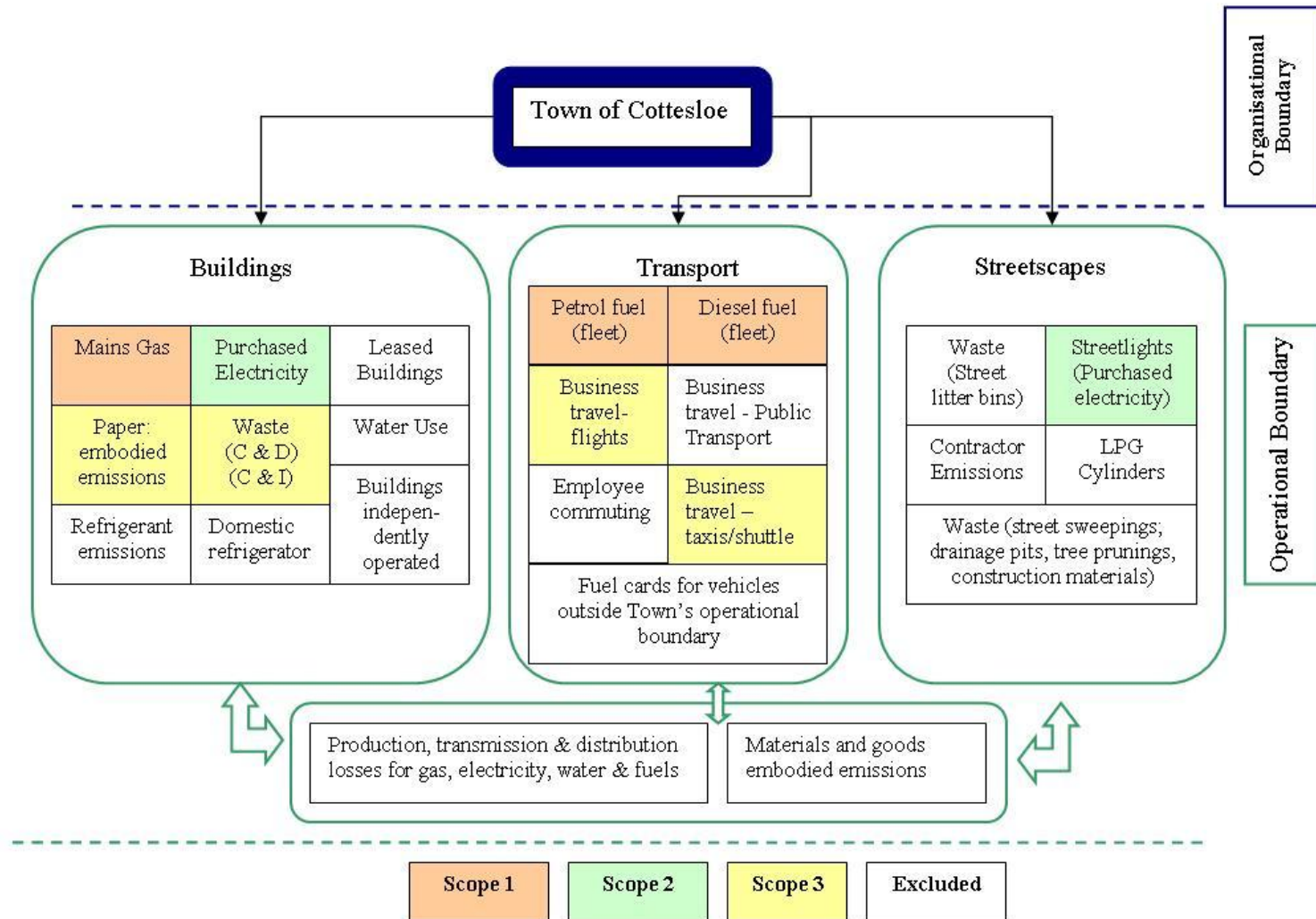


Figure 1: Town of Cottesloe's Organisational and Operational Boundaries for the carbon inventory (Source: Based upon diagram from p 25, GHG Protocol, WRSD 2004)

3. Carbon Inventory

The Town's corporate GHG emission sources are presented in Table 1, as a summary of the 2013/2014 Inventory. The Town's total GHG emissions, or carbon footprint, were calculated to be 299.71 tonnes of CO_{2-e} emissions for the 2014/2015 financial year.

Site	Emissions Source	Consumption	Consumption Units	Tonnes CO _{2-e}	Proportion of total inventory (%)
Scope 1					
Fleet	Vehicle - Petrol	21018.94	L	48.11	10.4%
Fleet	Vehicle - Diesel	28599.17	L	77.07	16.7%
Buildings	Gas	5827.61	m ³	0.30	0.1%
Total Scope 1				125.47	27.2%
Scope 2					
Buildings & Cottesloe Area	Purchased Electricity	254467.18	kWh	193.40	42.0%
Streetlights (Cottesloe owned)	Purchased Electricity	22294.20	kWh	16.94	3.7%
Total Scope 2				210.34	45.7%
Scope 3					
Streetlights (Western Power)	Purchased Electricity - Streetlights	424966.21	kWh	29.75	6.5%
Buildings	Waste - Commercial & Industrial	223.67	m ³	87.23	18.9%
Cottesloe Area	Waste - Construction & Demolition	23.50	m ³	5.96	1.3%
Town of Cottesloe	Business Travel (flights)	5460	km _(person)	0.61	0.1%
Town of Cottesloe	Office paper	1319.6	kg _(paper)	1.36	0.3%
Total Scope 3				124.91	27.1%
Total Scope 1, Scope 2 and Scope 3 emissions				460.71	100%
Reduction Measures					
Flight Offsets		0.528	Tonnes CO _{2-e}	-0.528	
Accredited Green Power		73000.00	kWh	-55.48	
Fleet Offsets		105.00	Tonnes CO _{2-e}	-105.00	
Net Emissions for Town of Cottesloe				299.71	

Table 1. Summary of 2014/2015 Carbon Inventory for the Town of Cottesloe

Source of Emissions as a Percentage of Total Footprint: Scopes 1, 2, 3

The breakdown of each source as a percentage of the total footprint is demonstrated in Figure 2. Scope 2 emissions, those generated offsite for council use, made up the largest proportion of the Town's footprint, accounting for just under the total footprint. Scope 1 emissions, those directly emitted by the Town's actions, made up 27.2% of the total footprint with the Town's fleet responsible for a majority of these emissions. While scope 3 emissions accounted for 27.1% of the footprint.

The makeup of the Town's footprint based on the 3 scopes has changed over the years; historically scope 2 emissions have contributed a much larger amount to the total footprint. This is largely related to changes in reporting streetlight emissions (see the Town of Cottesloe Carbon Inventory Report 2011/2012). While increase in consumption is evident in diesel; purchased electricity as a whole; and

waste, a minor increase of 5.46 tonnes of CO₂-e emissions for the 2014/2015 reporting period in comparison to the 2013/2014 reporting period can be attributed to several factors including:

- Decreased market value in Green Power
- Improved accuracy for reporting of waste
- Improved accuracy for reporting of Cottesloe owned streetlights

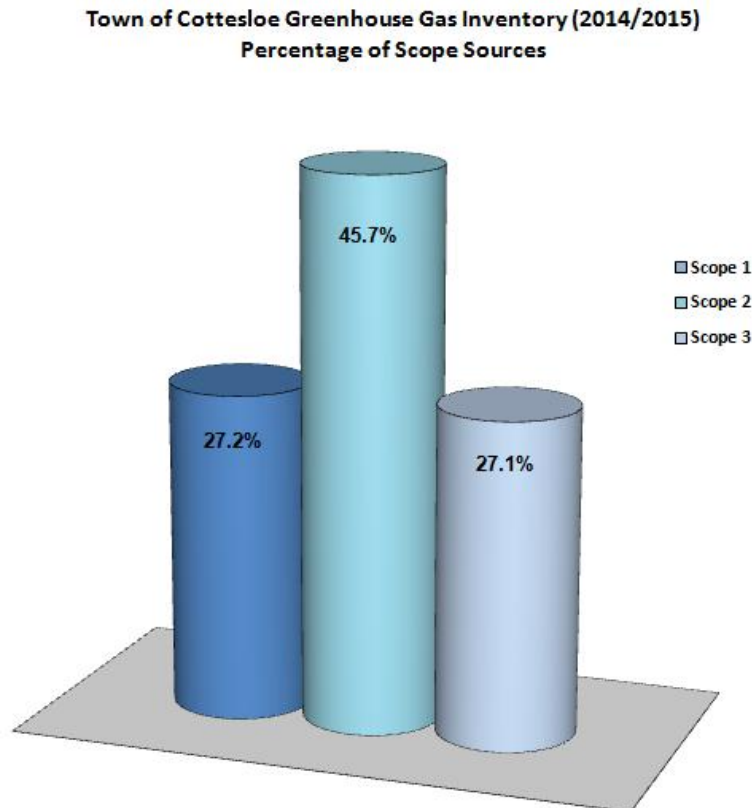


Figure 2. The source of emissions as a percentage of the total footprint, grouped as Scope 1, Scope 2 and Scope 3 emissions (see Table 1 for information on emissions included in each Scope)

Source of Emissions as a Percentage of Total Footprint: Activities

Figure 3 demonstrates the activities identified by the 2014/2015 carbon inventory as generating the most GHG emissions. These were:

1. Purchased electricity for facilities and infrastructure - The Town operates out of 2 main buildings, which require lighting, heating, ventilation and cooling throughout the year. Furthermore, the Town has operational control over a range of other sites such as change room facilities and other community facilities. Bore pumps, used to reticulate public open space and parks, require significant amounts of electricity, particularly in summer. In 2014/2015 an increase in overall consumption of purchased electricity can be observed, most notably with Cottesloe owned streetlights. This can be attributed to the improved accuracy of data collection, sourcing information direct from Synergy. On the contrary, actual consumption of purchased electricity for the Town's Civic Centre has decreased by over 4,500 kilowatt hours (kWh) compared to the previous reporting period. This can most likely

be attributed to the installation of a 15 kilowatt solar system on the Civic Centre at the start of 2013. To date the system has produced 77,416 kWh which corresponds to a saving of 58.8 tonnes of CO_{2-e} which would have otherwise entered the atmosphere.

2. Petrol and diesel combustion from fleet vehicles for transportation - Emissions from fleet vehicles, including mowers and buggies makes up 27.1% of the Town's footprint. Actual consumption of petrol has decreased, while the consumption of diesel increased over the reporting period. A significant proportion of staff members are provided with a Council-owned vehicle for commuting and personal use. These emissions figures therefore capture a degree of non-work related travel but it is impossible to separate fuel use. While there is an argument that the Town is responsible for these emissions since it has purchased and supplied the vehicle, it highlights a potential opportunity for reducing the Town's emissions; however, this will require changes to policy and recruitment practices. It is recommended that the practice of automatically providing new senior staff with a vehicle as part of their salary package be reviewed with an alternative being to offer staff a financial increase to their salary package. This has the potential to decrease the number of vehicles in Council's fleet.
3. Waste to landfill - The actual tonnage of waste produced at the Civic Centre and Depot from the Cottesloe area amounts to 20.2% of the 2014/2015 footprint. The doubling since last reporting period can be attributed to improved accuracy in reporting. Relocation of the Depot site in 2012/2013 led to a gap in data pertaining to waste; therefore, previous figures were used to estimate waste data as accurately as possible for the 2013/2014 period. However, for this reporting period data was sourced from Perthwaste and Veolia, in conjunction with anecdotal evidence, to enable more accurate reporting. Methodologies are outlined in the carbon inventory.
4. Purchased electricity for Western Power-owned streetlights - Although the proportion of the total footprint relating to street lighting has decreased in the last few years, sitting at just 6.5% at present, the total consumption and cost relating to this activity consistently remains the highest by a significant amount. The cost of Western Power-owned streetlights for the Town remains relatively unchanged, sitting at over \$140,000 this reporting period. Changes in reporting Western Power streetlights as a scope 3 emission as opposed to a scope 2 emission results in street lighting contributing to a minority of the Town's total footprint. Without a large financial investment (\$100,000+) in upgrading street lighting lamps, there is little the Town can do to abate these emissions, providing a barrier to lowering the cost to council.

Paper use made up only a minor portion of the footprint, contributing to 0.3% of emissions, with a majority of paper purchases already certified as carbon neutral by the supplier. Business travel also had an insignificant contribution to the footprint at 0.1%. In spite of this, the opportunity to offset these emissions is convenient and affordable. In 2014/2015 one return business trip was made with voluntary offsets purchased, resulting in reduced emissions. However, previous reporting periods have seen a higher number of staff travelling for business purposes, without opting to voluntarily offset their travel. It is recommended that staff are appropriately educated on the purchase of voluntary flight offsets and, when possible, take this option to reduce Council's emissions related to business travel. Meanwhile, gas only attributed to 0.1% of the footprint, with Anderson Pavilion and the Town's Depot being sole consumers.

**Town of Cottesloe Greenhouse Gas Inventory (2014/2015)
Source of Emissions as a Percentage of Total Footprint (Activit**

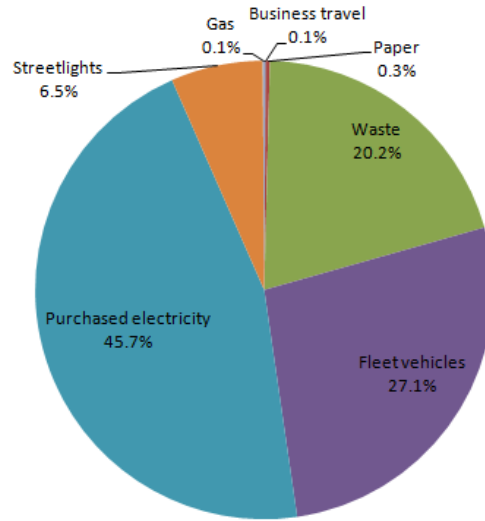


Figure 3. Activity Source of Emissions as a Percentage of Total Footprint.

Council’s Carbon Footprint: Changes since Baseline

The Town has demonstrated an encouraging decreasing trend pertaining to its total carbon footprint. Total emissions have decreased by over 500 tonnes CO₂-e since the baseline year.

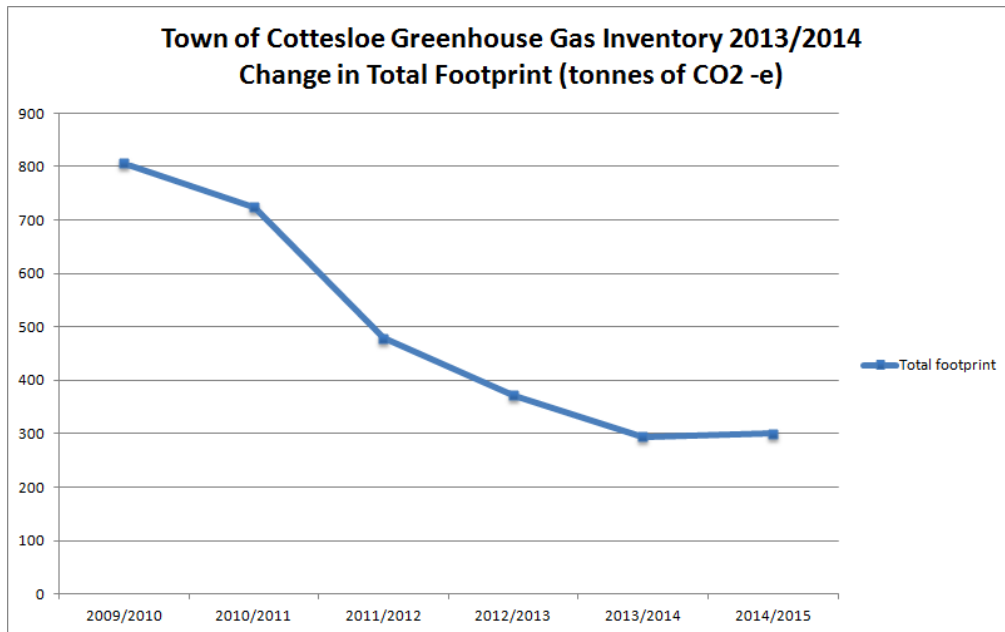


Figure 4. Change in total footprint since baseline year

In light of these reductions the Town has been successful in meeting its goal of a 15% reduction in actual 2009/2010 emissions, alongside being on target to achieving the overall goal of zero net emissions by 2015 (2014/2015 reporting period) through the purchase of offsets.

4. Implications

The Town has elected to voluntarily collect and report its GHG emissions through inventories and reports. These inventories and reports are a part of a voluntary process of reducing emissions and becoming 'carbon neutral'. The Town has chosen to follow the standards set out in NCOS by the Department of the Environment for voluntary carbon accounting, unless there is conflict with other council policy.

As mentioned in section 1, 'Calculating Emissions of Different Activities', emissions factors are regularly reviewed and recalculated by the Federal Government in order to reflect improved, up to date and best-practice carbon accounting standards. Changes in emissions factors or general reporting standards can alter the total carbon footprint of an organisation by reappportioning the total percentage each emissions-related activity is responsible for. This proves to be an implication when making direct comparisons of the carbon inventory from year to year, thus, it is important to look at actual consumption in conjunction with actual emissions rather than solely the total percentage breakdown of the footprint. For this reason it is also important to identify changes in reporting or emissions factors clearly within the carbon inventory report.

The repeal of the Carbon Tax in July 2014 saw a decrease in prices of certain commodities and services, most notable to council, purchased electricity. This change, however, has minimal impact on council's total spending. With fuel, electricity and waste costs likely to increase in future, it is prudent for the Town to identify ways to reduce their reliance on GHG intensive activities, suppliers and products in order to save significant amounts of money.

5. Next Step: Carbon Neutral Accreditation

Purchasing Offsets

As previously outlined, the Town is following a four-step process with the goal of becoming a carbon neutral council. With a reduction of over 60% in the Town's total carbon footprint since baseline reporting, it is now well positioned to complete the final step to becoming a carbon neutral council which entails purchasing carbon offsets to cancel all remaining emissions produced as a consequence of the Town's activities and, therefore, resulting in zero net emissions.

The process of carbon offsetting involves Council investing in projects that reduce greenhouse gas emissions or sequester carbon from the atmosphere. As the Town's carbon footprint decreases, opportunities for significant reductions are limited. Carbon offsetting is, therefore, necessary to negate all unavoidable emissions and, in turn, become carbon neutral.

Carbon offsetting follows a market-based mechanism, with costs varying depending on the project choice, the certification standard and the volume purchased. Offsets can be purchased for either/both domestic (Australian) and international (developing countries) projects. Although domestic offsets are often higher in cost, some of the associated benefits are as follows:

- Australia is one of the highest per-capita emitter of greenhouse gas emissions in the world. Investing in domestic offset projects translates into enacting on social and environmental responsibility to reduce local emissions.

- Local employment opportunities are created, while technical expertise and financial benefits are accrued domestically.
- The co-benefits of projects will inevitably have a local impact i.e. the conservation of biodiversity.

One of the recommendations to Council that emerged from the Town of Cottesloe Carbon Inventory Report 2013/2014 included endorsing a Carbon Offset Purchasing Policy. The purpose of the Policy is to guarantee that all carbon offset transactions reflect best-practice standards, ensuring that offsets are credible and that emissions reductions are verifiable, quantifiable and permanent.

Process of Accreditation

Council has the option of pursuing carbon neutral accreditation through the following means:

- a) The Department of the Environment's National Carbon Offset Standard (NCOS) Program; or
- b) "self-proclaimed" carbon neutrality.

The Town initially embarked on the process of becoming carbon neutral with a view of seeking accreditation through NCOS. This is evident through the following documentation: 2009/2010 Baseline Carbon Inventory Report to Council (2011); Carbon Neutral Workshop 1 (2011); and Greenhouse Gas Reduction Plan (2012).

In pursuing accreditation through NCOS, the Town is required to enter into a licensing agreement with the Department of the Environment and submit its "application pack" to the Department, that being baseline reporting data (2014/2015 carbon inventory).

This application pack submission follows on from firstly purchasing NCOS-endorsed carbon offsets and fulfilling the Department's requirement to have the inventories audited by a third-party. NCOS-endorsed offsets are subjected to a rigorous accreditation process, complying with one and/or multiple voluntary standards designed to ensure the quality of offsets.

Once the Town's application is successfully processed by the Department, the Town is entitled to use of the NCOS trademark and claim of carbon neutrality. To maintain NCOS carbon neutral accreditation the Town is required to report its latest carbon inventory to the Department every year, whilst fulfilling a requirement to audit its carbon inventory every second year. Furthermore, a licensing fee of \$3,529 (GST inclusive) for use of the NCOS carbon neutral trademark is to be paid to the Department on an annual basis. This fee has been included in the Town's 2015/2016 budget; therefore, resource requirements are in accordance with existing budgetary allocation.

Alternatively, the Town can essentially seek to become a "self-proclaimed" carbon neutral council such as the City of Fremantle. This option entails having the Town's carbon inventory audited by a third-party to verify legitimate claims of carbon neutrality, and having the Town's inventories audited every second year hereon in to comply with best-practice standards. Further to this, the Town avoids the necessity of paying the annual licensing fee to the Department for use of the NCOS trademark and carbon neutral claim.

With the event of the City of Fremantle becoming a carbon neutral council in 2009, it chose not to seek NCOS accreditation. The reason for this being that at the time no local NCOS approved carbon offsets were available for purchase. The City's 2010/2011 Inventory Report states that:

"The City however feels that the use of local offsets is more important than National Carbon Offset Standard NCOS accreditation... As such, the City is not seeking NCOS accreditation, nor making any formal claims against the NCOS. This inventory and all supporting documentation, including the Emissions Management Plan has however been prepared with the objective of meeting all NCOS requirements, except for the offset source."

Since this time, local Western Australian NCOS-endorsed carbon offsets have been made available for purchase. Therefore, it is recommended that NCOS carbon neutral accreditation is pursued by the Town. The advantages of this are as follows:

- The Town will qualify as the first NCOS carbon neutral accredited council in Western Australia. This demonstrates leadership in the landscape of voluntary carbon accounting, reporting and environmental impact reduction, furthermore, attracting positive publicity for the Town due to its proactive approach to tackling climate change.
- The NCOS Program provides a consistent framework for carbon accounting and emissions reporting .
- By becoming certified through the NCOS Program the Town can expect a high level of assurance regarding the legitimacy of its claim of carbon neutrality as the Program provides a benchmark for assessing such claims.
- The NCOS Program provides a framework that ensures transparent reporting methodologies, allowing carbon neutral claims to be objectively assessed by the community.
- Strict criteria must be met by the Town upon entering the NCOS program of which the Department is responsible for overseeing, therefore, a high level of accountability lies with the Department in regards to the Town's claim of carbon neutrality.
- NCOS approved offsets ensure the credibility of carbon offsets available for sale in the voluntary carbon market.
- Upon successfully achieving carbon neutral claims through the NCOS program the Town is entitled to utilise the NCOS Carbon Neutral Certification Trade Mark to promote its carbon neutral achievement, warranting community confidence in the Town's claim.

6. Recommendations

Recommendations for the Town following the completion of the 2014/2015 inventory are as follows:

1. This report be published on the Town's website by April 2016.
2. The Town continually review boundaries set at the baseline year to determine if they are still appropriate.
3. The Town investigate the practicability of offering new staff members a financial increase to their salary package as an alternative to the current practice of automatically providing all senior staff with a vehicle as part of their salary package.
4. The Town encourage the practice of purchasing the voluntary flight offset option for business travel.
5. The Town's staff develop a Carbon Offset Purchasing Policy.
6. The Town investigate and purchase offsets in accordance with the Policy to bring the Town's footprint to zero net emissions in time for the 2015 (2014/2015 reporting period) goal of carbon neutrality.
7. The Town to peruse carbon neutral accreditation through the Department of the Environment's National Carbon Offset Standard Program.

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Appendix

Emissions Sources Included

Table 1. Emissions sources included in the boundary for the Town's carbon Inventory 2014/2015

Emissions Source	Scope	Justification/Explanation
Petrol fuel (fleet)	Scope 1	The Town consumed petrol for transportation. As the Town allows private use of vehicles, some of these emissions relate to personal use.
Diesel fuel (fleet)	Scope 1	The Town consumed diesel for transportation and works machinery.
Natural Gas	Scope 1	The Town consumed pipeline distributed natural gas at a number of sites.
Purchased electricity (buildings)	Scope 2	The Town consumed purchased electricity for lighting, heating, cooling and miscellaneous activities at Council owned buildings.
Purchased electricity (streetlights - Cottesloe)	Scope 2	The Town consumed purchased electricity for streetlights, owned and operated by Cottesloe.
Purchased electricity (bores & infrastruct)	Scope 2	The Town consumes purchased electricity to power water bores and other infrastructure in parks and open spaces.
Purchased electricity (streetlights – Western Power)	Scope 3	The Town consumed purchased electricity for Western – Power owned streetlights. This is included as Scope 3 from 2011/12 onwards as WALGA has recommended the reporting of streetlights as Scope 3 emissions as of 2011/12.
Business travel - flights	Scope 3	Business flights have been included in the carbon inventory since NCOS recommends that business travel should be included as a minimum standard for carbon accounting.
Paper use	Scope 3	Paper use has been included since it is a major product used in the office and NCOS recommends that paper use should be included as a minimum standard for carbon accounting.
Waste Commercial and Industrial (C & I) Construction and Demolition (C & D)	Scope 3	All waste disposed to landfill from Council operations was included since it is an area that the Town could target to reduce emissions. NCOS recommends that disposal of waste generated by an organisation should be included as a minimum standard for carbon accounting.

Emissions Sources Excluded

The following sources are documented to ensure transparency and adequate justification for exclusion. These include all *potential* emissions from Council-related activities, but for a variety of reasons, cannot be included in the inventory.

Table 2. Emissions sources excluded from the Town's carbon Inventory 2014/2015

Emissions Source	Scope	Justification
Refrigerant emissions (domestic fridge)	Scope 1	Emissions from the domestic refrigerator have been excluded since they were considered to be negligible.
Refrigerant emissions (air conditioner)	Scope 1	The Town has approximately ten air conditioning units that service the Civic Centre building. These were considered to have a low contribution to the emissions footprint and so were excluded from the carbon inventory.
LPG cylinders	Scope 1	The Town has one portable LPG cylinder for the barbeque at the Depot, which has been excluded from the carbon inventory since it is considered to have negligible contribution to the Town's emissions footprint.

Employee commuting (personal vehicles)	Scope 3	This inventory aims to present the major emissions under the Town's operational control. Employee commuting does not fit within the objectives set but it may be partly addressed through initiatives such as a Sustainable Travel Allowance. Commuting in a Council-owned vehicle is included as Scope 2 emissions.
Employee commuting & Business Travel (public transport)	Scope 3	Public transport is considered to be difficult to measure and likely to be a marginal part of the transport used by most employees. At this stage it has been excluded from the carbon inventory for the Town.
Fuel cards for vehicles outside the Town's operational boundaries	Scope 3	Fuel cards that the Town manages for external use (e.g. TAPSS minibus and staff vehicles) have been excluded since they are not under the operational control and hence fall outside the boundaries for the Town's carbon inventory.
Waste (street litter bins)	Scope 3	The Town aims to include waste from street litter bins as part of their carbon inventory but the availability and quality of data is not yet sufficient. Data capturing methods will be put in place so that waste from litter bins can be included in future inventories.
Waste (tree prunings; street sweepings, drainage pits, construction materials)	Scope 3	Tree prunings and other vegetation waste from the Town's operations is all mulched and re-used. Construction materials are collected by a contractor who reclaims and recycles almost all of the content. Contaminated soils and sands from street sweeping are remediated and then sold as soil after the process is complete. Since these products are claimed and re-used they have been excluded from the Town's carbon inventory.
Contractors	Scope 3	Emissions generated from contractors and the activities that they are hired to do for the Town have been excluded from the inventory but may be included in future inventories if data can be calculated to a satisfactory level of accuracy.
Water use and associated production and distribution emissions.	Scope 3	Water use (and associated production and distribution emissions) has been excluded since it is not considered to be a major emissions source. Water use may be included in future inventories.
Emissions from extraction and transport of petrol	Scope 3	The Town has chosen to exclude emissions from extraction and transport of petrol since the Town has an inability to affect these emissions.
Emissions from extraction and transport of diesel	Scope 3	The Town has chosen to exclude emissions from extraction and transport of diesel since the Town has an inability to affect these emissions.
Emissions from fuel extraction and T&D line losses for purchased electricity	Scope 3	The Town has chosen to exclude emissions from extraction and T & D line losses for purchased electricity since the Town has an inability to affect these emissions.
Emissions from extraction, transport, and line losses of natural gas	Scope 3	The Town has chosen to exclude emissions from extraction, transport and line losses of natural gas since the Town has an inability to affect these emissions.
Materials and Goods embodied emissions	Scope 3	Emissions generated from materials and goods embodied emissions have been excluded but may be included in future inventories if data can be calculated to a satisfactory level of accuracy.
Leased and Independently Operated Buildings	Scope 3	All Leased and Independently managed Council owned buildings have been excluded from the Town's carbon inventory since they fall outside the chosen boundary of "operational control".
Business travel – taxis/shuttles	Scope 3	Taxis and Shuttles have previously been included, however estimating mileage and fuel use became problematic and inaccurate. Figures for Taxis were not representative of emissions and have been excluded for 2013/14. This will be reviewed next year.

Carbon Offset Purchasing Policy

(1) AIMS/OBJECTIVES

This guideline aims to provide a clear framework for purchasing carbon offsets in order to:

-) Provide guidance for the Town to ensure all carbon offset transactions reflect best-practice standards
-) Ensure that purchased offsets are credible, and that emissions are verifiable, quantifiable and permanent
-) Provide compliance with the Town's existing Purchasing Policy and sustainability objectives

(2) PRINCIPLE

The Town of Cottesloe is committed to reducing its environmental impact and acting to ameliorate and adapt to the impacts of climate change. This is demonstrated through council's unanimous decision to pursue carbon neutrality in 2010.

Since this time the Town has implemented several emissions reductions strategies and technologies to reduce its carbon footprint. It has followed a four-step process to becoming a carbon neutral entity, as documented in the Greenhouse Gas Reduction Plan.

While the Town will make every effort to reduce its emissions prior to purchasing offsets, and opportunities for carbon abatement will continuously be researched, it will inevitably continue to produce some emissions for the foreseeable future. For the fourth and final step the Town will, therefore, need to purchase offsets to achieve its goal of becoming carbon neutral.

(3) ISSUES

Because carbon offsets are not a tangible commodity for the purchaser, the assurance of the quality is directly related to the entity making the claim.

For this reason, international verification and validation standards exist within the voluntary carbon offset market. Accredited carbon offsets must meet stringent criteria set out by third party entities. This provides assurance to the purchaser; to ensure that carbon offset reductions are authentic, additional and permanent.

(4) POLICY

4.0. The Town of Cottesloe is committed to implementing appropriate mitigation strategies that address human enhanced climate change, evident in its goal of becoming carbon neutral. As such, pragmatically sourcing carbon offsets to achieve reductions in global greenhouse gas emissions in line with the Town's existing policies and values will assist in this pursuit. This Policy is designed to:

Ensure that transactions reflect 'best practice' carbon accounting standards

4.1. When purchasing carbon offsets the Town will ensure that all transactions follow the four key principles as required by carbon accounting standards, in complying with the Town's Purchasing Policy, clause 1.4, which notes that any relevant methods of assuring quality should be considered. These principles are:

-) Real – Quantified greenhouse gas reductions must represent actual reductions from a baseline scenario.
-) Additional – Reductions must be surplus to regulation and beyond what would have happened in the absence of the project or in a business-as-usual scenario.
-) Permanent – Reductions must be permanent or have guarantees to ensure that any losses are recaptured in the future.
-) Verifiable – Reductions accrue from projects whose performance can be readily and accurately quantified, monitored and confirmed.

4.2. In ensuring these key principles are met, the Town will only purchase accredited carbon offsets which have been verified by third-party standards, and National Carbon Offset Standard approved, including:

-) The Gold Standard – selling Voluntary Emission Reductions (VERs)
-) Verified Carbon Standard – selling Verified Carbon Units (VCUs)
-) Carbon Farming Initiative – selling Australian Carbon Credit Units (ACCUs)

Reflect appropriate priorities

4.3. To ensure that all offset transactions meet the Town's overarching sustainability values, locally generated offsets will be prioritised, which result in positive environmental and/or social impacts domestically.

4.4. In selecting the most appropriate offset project, the Town will prioritise projects with resulting co-benefits. Co-benefits reflect additional environmental, social or sustainable development benefits not directly associated with carbon

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emission reductions such as biodiversity conservation, improved air and/or water quality, soil erosion reduction, improving the local economy as well as increased employment opportunities.

4.5. The Town will research all carbon offset project types available at the time of purchase including, but, not limited to: land use, land-use change and forestry; energy efficiency; renewable energy; and methane capture projects. However, clause 4.3 and 4.4, as outline above, should form essential criteria in selecting appropriate offset projects.

Reflect appropriate purchasing thresholds

4.6. All carbon offset transactions are to be made in accordance with the Town's existing Purchasing Policy, following the purchasing thresholds as outlined in clause 1.6 of the Policy.

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