



Byron Shire Council

Climate Active-Compliant Emissions Boundary

May 2021

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1 Executive summary

Byron Shire Council (BSC) commissioned this report to prepare for Climate Active carbon-neutral certification by 2025. The goal of this report is to develop a Climate Active-compliant emissions boundary and conduct a peer review of the current scope 1 and 2 reporting system.

The proposed Climate Active emissions boundary for Byron Shire Council is shown in the figure below. Proposed included and excluded emission sources are a result of the relevance test that was conducted with Council staff. This test is a requirement under the Climate Active methodology. Please note that the boundary may change slightly after a more detailed investigation of data has been performed.

Organisational Boundary

● Scope 1 ● Scope 2 ● Scope 3 ○ Scope 3 non quantified or excluded



FIGURE 1: BOUNDARY ASSESSMENT FOR THE CLIMATE ACTIVE CARBON FOOTPRINT

The current data collection system and reporting tools were reviewed and the table below is a summary of the recommendations. For more information, please refer to sections 5 and 6.

TABLE 1: SUGGESTIONS FOR IMPROVEMENTS IN DATA COLLECTION

Emission Source	Suggested improvement in data collection
Refrigerants	Council should request a report with the type of refrigerant and corresponding charge in kg of all major air conditioning systems from external contractors.
Diesel - stationary	Council needs to develop a methodology to account for diesel consumption of generators. One option is to record this information in an Excel database.
Solar consumption and export	Council could create an Excel database for all solar data for easy transfer of information.
Scope 3 facilities	Council may consider creating an Excel database with meter numbers (NMI) for each leased-out asset to monitor the energy consumption of these sites and to confirm whether they are accounted for in Azility.
Water	Council may consider using Azility's capability in capturing this data.
Waste from Council operations	Council advised that waste-related emissions are being offset. However, Climate Active requires the collection of activity data, even if the associated emissions are being offset. It is therefore important to keep track of the tonnes of waste.
Air travel	Council advised that collecting air travel data is difficult. Council may consider outsourcing flight bookings to a travel agency, as the agency may be able to provide comprehensive reports.
Business accommodation	Similar to air travel, a travel agency could also provide a report on business accommodation.
Employee commute	Council advised that most employees are using cars to go to work. To clarify, travel from home to work is considered employee commute. Council may consider conducting an employee commute survey every two years to obtain a better picture on staff commute emissions.
Other scope 3 emissions covered in Finance extract	Council may consider updating the Finance account code system to capture a number of scope 3 emission sources which are currently not captured.

Council may also consider updating the existing internal GHG reporting tool to include scope 3 emissions to be compliant with the Climate Active Standard.

2 Project background and purpose of this report

Byron Shire Council targets to achieve carbon-neutral certification under the Climate Active Standard by 2025. Council has been internally reporting scope 1 and 2 emissions for a number of years.

Council commissioned 100% Renewables to develop a Climate Active-compliant emissions boundary and conduct a peer review of the current scope 1 and 2 reporting system as part of phase 1 (see Option A in the picture below). As part of phase 2 (see Option B in the picture below), a full Climate Active inventory will be prepared.

This report establishes a Climate Active-compliant emissions boundary, reviews the existing scope 1 and 2 reporting system's compliance with the Climate Active standard, identifies a best-practice framework for capturing and calculating emissions data and reporting emissions.

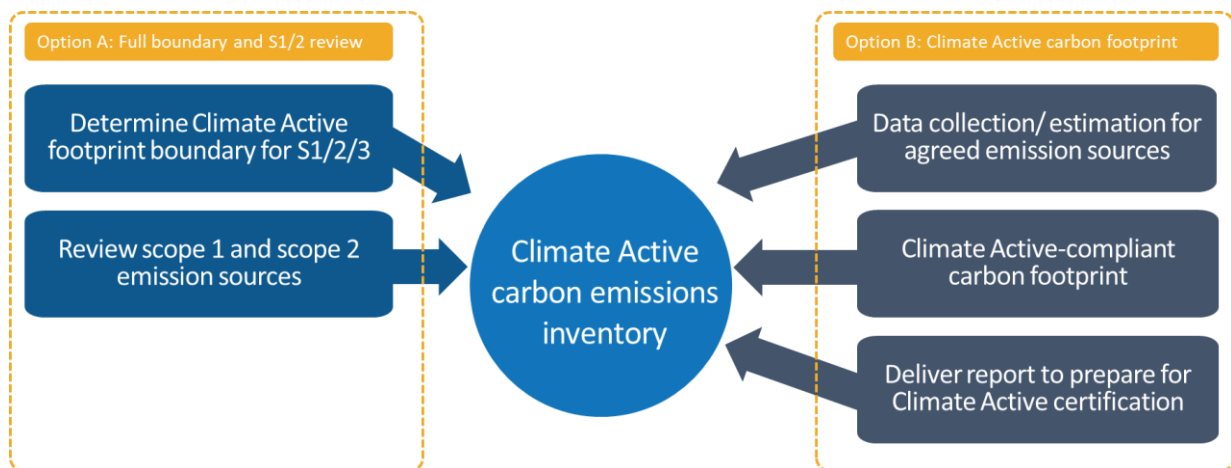


FIGURE 2: PROJECT SCOPE

3 Organisational and operational boundary assessment

Byron Shire Council is wholly owned and operated by one legal entity, and the organisational boundary encompasses assets under the ownership or operational control of Council.

Byron Shire Council follows the operational control approach for consolidating GHG emissions throughout the organisation to make sure that emission sources it can directly affect through carbon management strategies can be categorised as scope 1 or 2 and that those GHG emission sources over which it has limited control can be categorised as scope 3.

3.1 Carbon accounting 'scopes'

To help differentiate between different emissions sources, emissions are classified into the following scopes according to the GHG Protocol – Corporate Standard:

- Scope 1 emissions include all direct greenhouse gas emissions from sources that are within the organisation's control boundary. These could be emissions from fuel use, refrigerants and on-site electricity generation.
- Scope 2 emissions include purchased electricity, heat, cooling and steam (i.e. energy produced outside the organisation's control boundary but used within the organisation).
- Scope 3 emissions are all indirect emissions that occur as a result of the activities of the organisation but occur from sources outside the organisation's control boundary.

These emissions scopes are illustrated below.

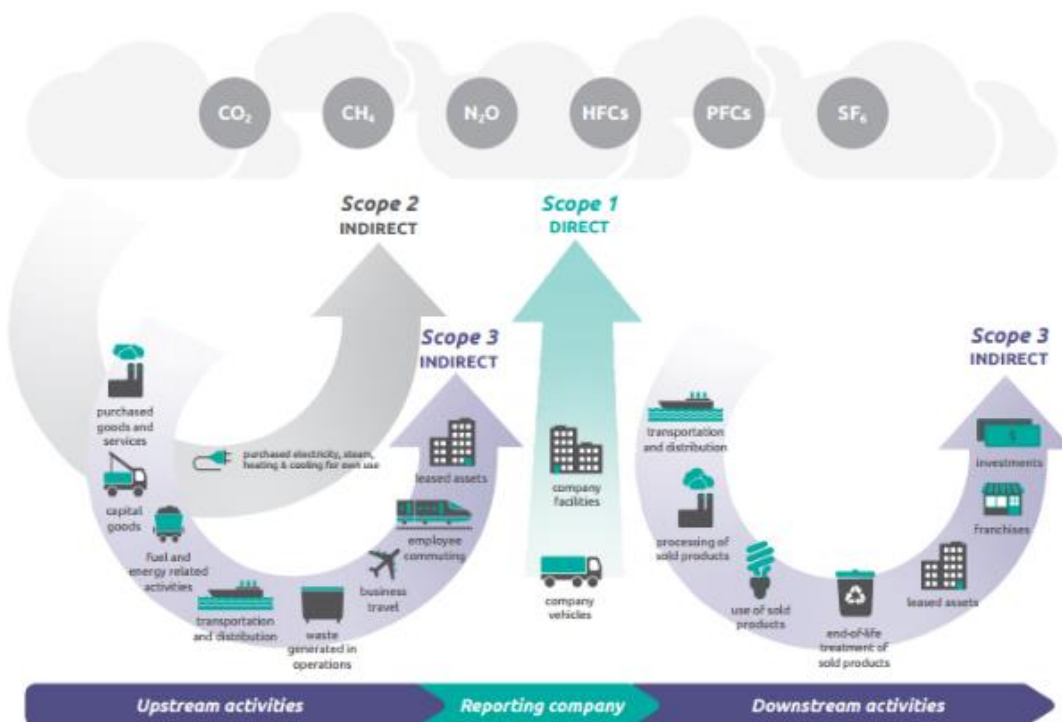


FIGURE 3: DIRECT AND INDIRECT EMISSIONS - SCOPES

3.2 About Climate Active

Climate Active used to be called the 'National Carbon Offset Standard', or NCOS for short. The National Carbon Offset Standard and Carbon Neutral Program were launched by the Australian Government in 2010 to provide a credible framework for managing emissions and achieving carbon neutrality. Initially, the Standard was designed for organisations, products and services and was expanded to events, buildings and precincts in 2017.

The Climate Active Carbon Neutral Standard for Organisations (Organisation Standard) is a voluntary standard to manage greenhouse gas emissions and achieve carbon neutrality. It provides best-practice guidance on how to measure, reduce, offset, validate and report emissions that occur as a result of the operations of an organisation. Further information is available at www.climateactive.org.au

Organisations have the opportunity to utilise Climate Active for their assessment and self-declaration of carbon neutrality, but businesses that wish to have their carbon neutral status certified and recognised need to participate in the Carbon Neutral Program.

3.3 High-level process for achieving Climate Active certification

The process for achieving carbon-neutral certification involves the following:

- Preparing an Annual Inventory Report
- Preparing a Public Disclosure Summary
- Engaging a registered consultant to comply with the requirements on your account or conduct a technical assessment as required every three years.
- Submitting the application package to Climate Active
- Assessment for carbon-neutral certification by Climate Active
- Third-party validation of the inventory in the first year of certification and any base year recalculation in the succeeding years.
- Award of carbon-neutral certification for the reporting period by Climate Active to Council

3.4 Mandatory inclusion of scope 3 emission sources under Climate Active

Under Climate Active, organisations must include scope 1 and 2 as well as relevant scope 3 emission sources in their boundary.

Broad categories of scope 3 emissions sources that need to be considered are as follows:

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets
9. Downstream transportation and distribution

10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investments

The following picture shows upstream scope 3 emissions on the left, and downstream scope 3 emissions on the right.

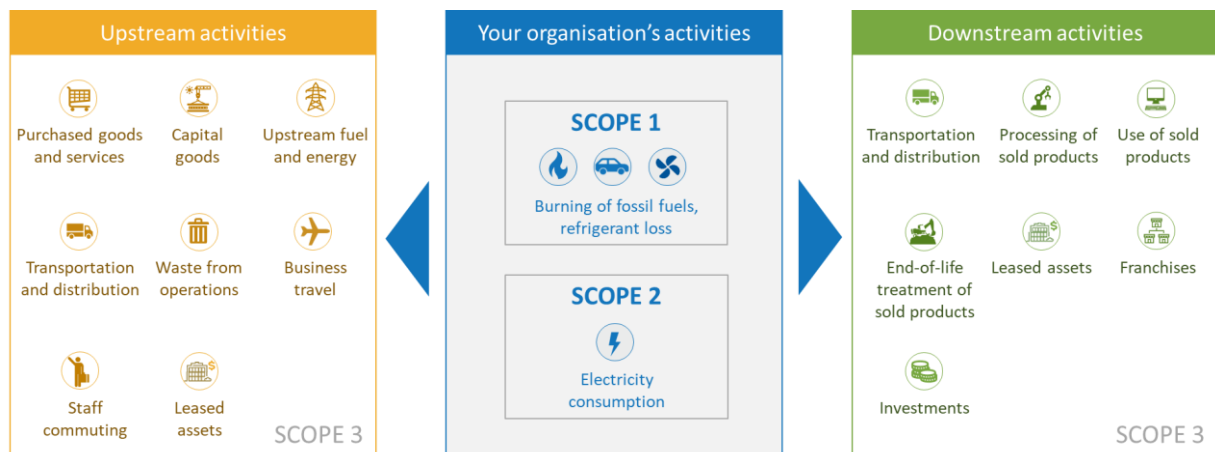


FIGURE 4: UPSTREAM AND DOWNSTREAM SCOPE 3 EMISSIONS

3.5 Climate Active boundary assessment

Based on the Climate Active scope 3 categories, the materiality of the emissions source, the availability of activity data and emission factors, the following scope 1, 2 and 3 emission sources could be considered in 2025 when Council will look to become 'carbon-neutral'.

TABLE 2: INCLUDED EMISSION SOURCES UNDER CLIMATE ACTIVE

Emission Source	Scope(s)
LPG stationary	1 and 3
Fleet - Diesel	1 and 3
Fleet - Petrol	1 and 3
Fleet - Ethanol	1 and 3
Refrigerants	1
Closed landfill	1
Wastewater	1
Electricity	2 and 3
Streetlighting	2 and 3
Scope 3 facilities	3
Water	3
Acetylene	3
Air travel	3
Business accommodation	3
Employee commute	3
Fuel use waste contractor	3
Paper	3
IT equipment	3
IT software	3
Office equipment	3
Food and catering	3
Postage and couriers	3
PopCar	3
Waste	3
Telecommunications	3
Cleaning	3
Pest control	3
Stationery	3
Chemicals	3
Professional services	3
Asphalt	3
Concrete	3
Other road-building materials	3
Machine and vehicle repairs	3
Equipment hire	3
Clothing	3
Hire cars	Non-quantified

The following graphic shows the proposed organisational and operational boundary under Climate Active.

Organisational Boundary

● Scope 1 ● Scope 2 ● Scope 3 ○ Scope 3 non quantified or excluded

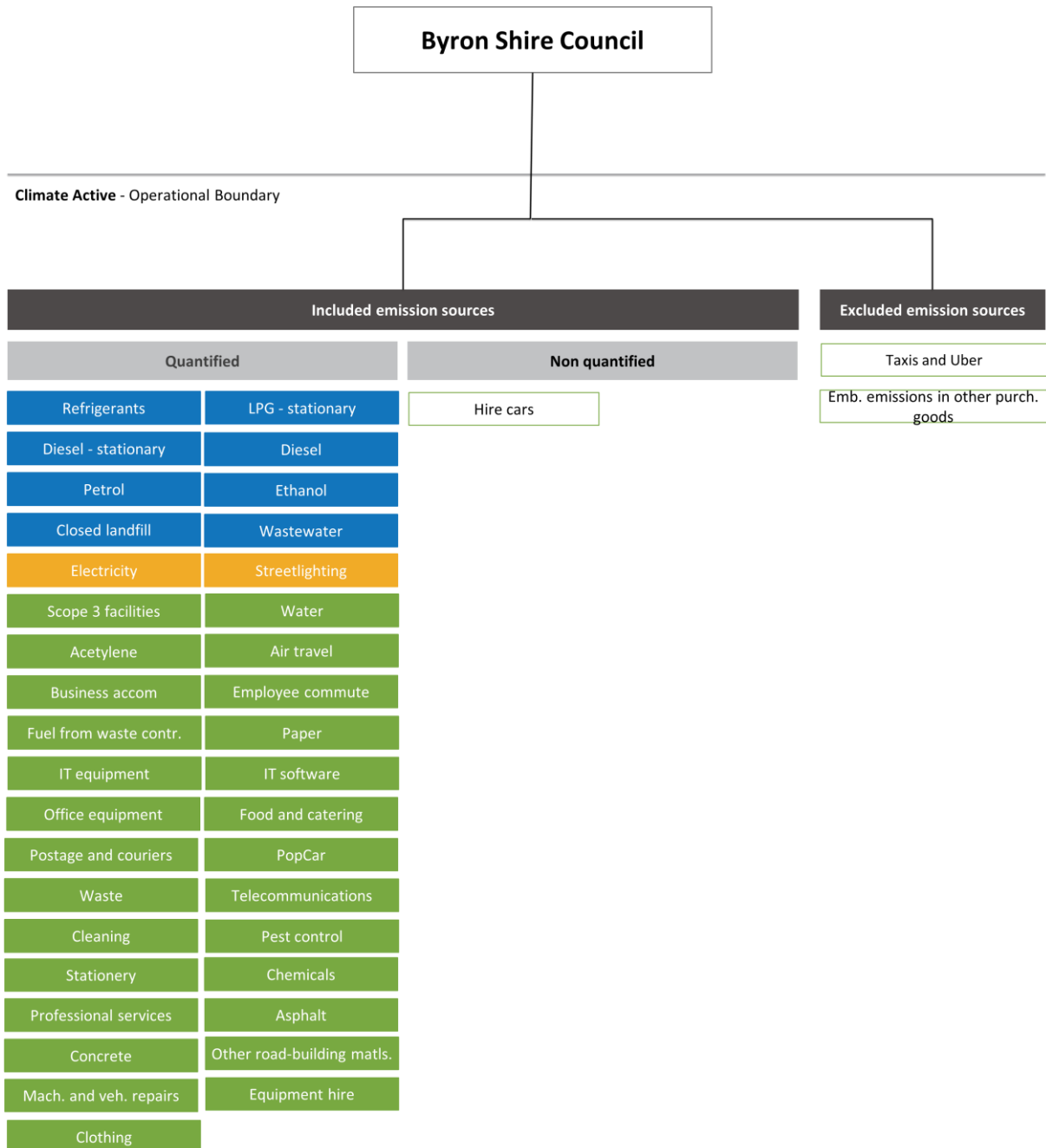


FIGURE 5: BOUNDARY ASSESSMENT FOR THE CLIMATE ACTIVE CARBON FOOTPRINT

Emissions from professional services purchased by Council are included in the current carbon footprint boundary. These are emissions incurred by consultants, such as their energy and water use, or travel. The following list shows Council's potential professional service categories (identified via the Finance extract provided).

- Entertainment
- Business services
- Advertising
- Legal fees
- Education and training

3.6 Further information about included and excluded emissions

Under Climate Active, stationary energy, fuels and electricity consumption have to be included in the carbon footprint, as shown in the figure below. However, non-relevant emission sources can be excluded from the boundary. Relevant emission sources for which there is no data or which are immaterial, can be non-quantified, but must be included in the boundary.

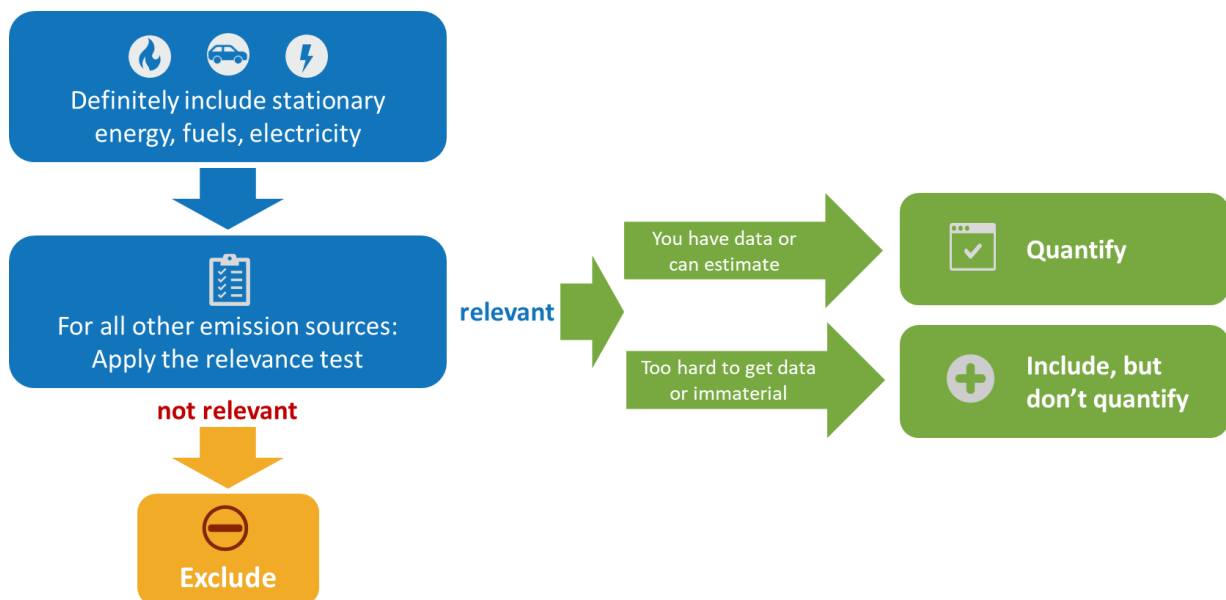


FIGURE 6: HOW TO DETERMINE WHETHER EMISSIONS ARE INCLUDED OR EXCLUDED UNDER CLIMATE ACTIVE

3.6.1 Excluded emissions

The 'relevance test' under Climate Active determines if an emission source aside from stationary energy, fuel and electricity under Council's operational control is included or excluded in the boundary. It states that if less than two of five relevance criteria are met, an emissions source can be excluded from the boundary. The five criteria are listed below:

1. The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions.
2. The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.
3. Key stakeholders deem the emissions from a particular source as relevant.
4. The responsible entity has the potential to influence the reduction of emissions from a particular source.
5. The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.

Based on conducting the relevance test, the following scope 3 emission sources were excluded from the emissions boundary:

- Taxis and Uber
- Embedded emissions in other purchased goods

The table below shows the current results of the relevance test for the two emission sources that were deemed irrelevant.

TABLE 3: RESULTS OF RELEVANCE TEST FOR EXCLUDED EMISSIONS

Emission Source	Scope	RELEVANCE TEST: Y/N					Emission source classification
		The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions.	The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.	Key stakeholders deem the emissions from a particular source as relevant.	The responsible entity has the potential to influence the reduction of emissions from a particular source.	The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.	
Taxis and Uber	3	N	N	N	Y	N	Excluded
Embedded emissions in other purchased goods	3	N	N	N	N	N	Excluded

3.6.2 Non-quantified emissions

A relevant or included emission source can be non-quantified under certain circumstances. To see if an emission needs to be captured under 'non-quantified', the Climate Active 'non-quantification test' should be undertaken. If at least one of the justifications shown below applies to an emission source, it can be classified as 'non-quantified'.

- Immaterial: <1% for individual items and no more than 5% collectively
- Quantification is not cost-effective relative to the size of the emission, but uplift applied.
- Data unavailable, but uplift applied. A data management plan must be put in place to provide data within five years.
- Initial emissions non-quantified but repairs and replacements quantified

The majority of the identified relevant emission sources are currently classified as 'quantified'. Although data has been provided, some emission sources require detailed data extracts to estimate the underlying activity. When the inventory is being developed, some might be re-classified as 'non-quantified' after a thorough data assessment.

At this stage, the only emission source that has been identified as 'non-quantified' is 'hire cars', as shown in the table below. According to Council, emissions from 'hire cars', specifically those that are 'short term' only, are expected to be less than 1% of the total inventory. Hence, 'hire cars' are considered 'immaterial and can be non-quantified'.

TABLE 4: NON-QUANTIFICATION TEST FOR NON-QUANTIFIED EMISSIONS

Non-quantification test				
Relevant-non-quantified emission sources	<i>Immaterial <1% for individual items and no more than 5% collectively</i>	<i>Quantification is not cost effective relative to the size of the emission but uplift applied.</i>	<i>Data unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.</i>	<i>Initial emissions non-quantified but repairs and replacements quantified</i>
Hire cars	Yes	No	No	No

4 Council's current GHG emissions tracking versus Climate Active requirements

Council currently collects electricity, LPG, fuel and wastewater data in Azility. These are scope 1, 2 and 3 emissions which are estimated to equate to around 60% of a Climate Active-compliant carbon footprint before carbon reduction measures.

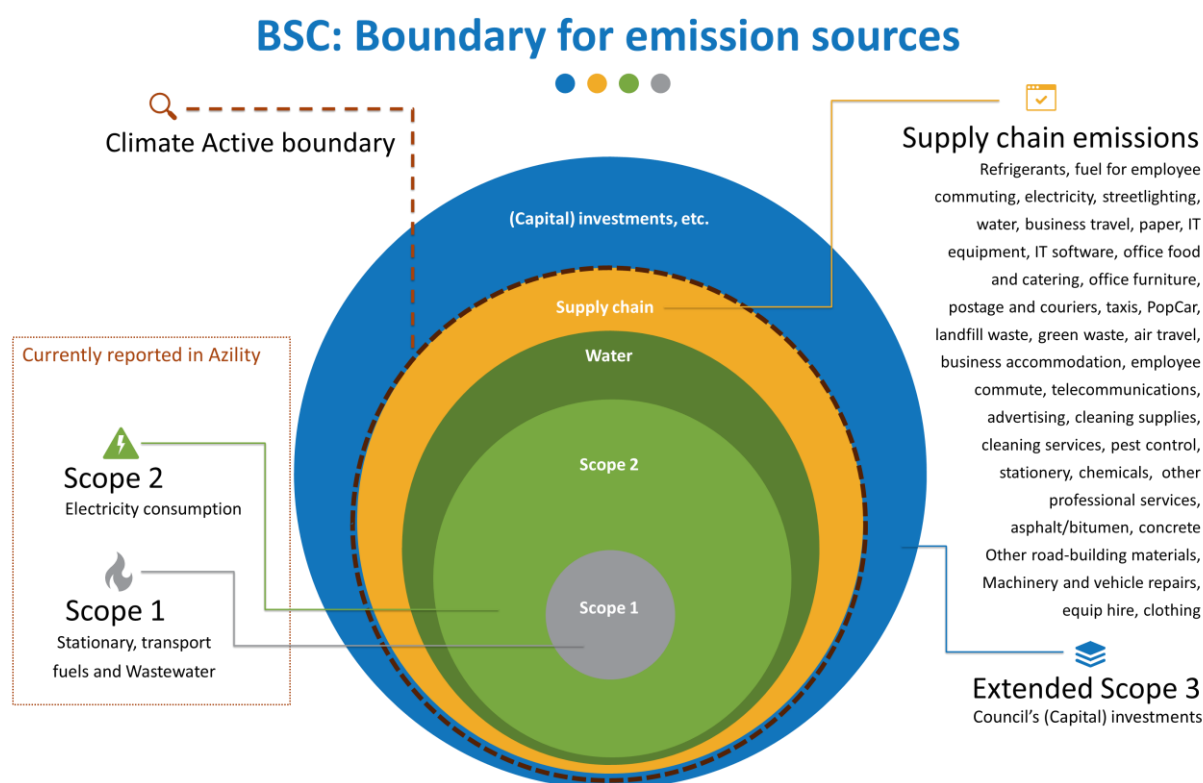


FIGURE 7: CURRENTLY TRACKED AND ADDITIONAL EMISSIONS UNDER CLIMATE ACTIVE

The following table shows the emission sources currently being monitored in data collection systems, along with their scopes.

TABLE 5: CURRENTLY REPORTED CARBON EMISSIONS

Emission Source	Scope(s)	Data capturing system
LPG - stationary	1 and 3	Azility/Internal GHG tool
Diesel – stationary	1 and 3	Included in depot bulk fuel
Council Fleet Vehicles Diesel	1 and 3	Azility/Internal GHG tool
Council Fleet Vehicles Petrol	1 and 3	Azility/Internal GHG tool
Council Fleet Vehicles Ethanol	1 and 3	Azility/Internal GHG tool
Electricity (Council Assets)	2 and 3	Azility/Internal GHG tool
Electricity (Street Lighting)	2 and 3	Azility/Internal GHG tool
Wastewater	1	Azility/Internal GHG tool
Closed landfill waste	1	Internal GHG tool
Green waste	1	Internal GHG tool

5 Peer review of existing scope 1 and scope 2 emissions reporting

100% Renewables analysed and reviewed the data from Azility and Council's existing emissions reporting tool.

5.1 Azility

100% Renewables extracted energy and water data from Azility using Council's Azility account. The data was assessed based on its completeness and compliance with the Climate Active emission factors.

5.1.1 Electricity

Currently, there are 186 electricity accounts in Azility. 109 out of 186 accounts have complete data in Azility, while the rest were partially estimated by Azility except for meter number - NMI 44071797451, which was completely estimated. A summary table below shows the quality analysis of the electricity data in Azility.

TABLE 6: QUALITY ANALYSIS OF ELECTRICITY DATA IN AZILITY

Summary				
Total no. of electricity accounts				186
No. of accounts with complete data				109
No. of accounts with estimated data				77
	Total consumption	Actual consumption	Estimated consumption	% actual data
Council assets electricity consumption	5,227,950.0 kWh	5,120,886.4 kWh	107,063.6 kWh	97.95%
Streetlighting electricity consumption	777,969.0 kWh	777,969.0 kWh	0.0 kWh	100.00%

The electricity emission factor used by Azility is the same as the electricity emission factor used in the Climate Active calculator, as shown in the table below. However, Council might want to confirm with Azility whether the software applies the latest NGA factors as the 2019 and 2020 inventories are using the same electricity emission factor. Climate Active uses the latest available emission factors.

TABLE 7: ELECTRICITY EMISSION FACTORS COMPARISON (AZILITY VS CLIMATE ACTIVE)

Emission Source	Emission factors used by Azility (kg CO ₂ -e/GJ or kWh)			Climate Active factors (kg CO ₂ -e/GJ or kWh)			Assessment
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	
Electricity		0.81	0.09		0.81	0.09	Same emission factors used

The method used by Azility is consistent with Climate Active's *location approach* which is based on the NGA factors. Climate Active has recently published new accounting rules for electricity emissions. One of the biggest changes is that an organisation now has to report both location-based, as well as market-based electricity-related emissions.

There are differences as to how emission reduction measures are treated in the two approaches. A summary of the main differences is shown in the table below. A tick means that the electricity reduction measure can be deducted from electricity emissions, while an 'X' means that it can't be deducted.

TABLE 8: COMPARISON OF THE LOCATION AND MARKET-BASED APPROACHES

Electricity reduction measure	Location-based approach	Market-based approach
LGCs retired	X	✓
Renewable energy target	Part of location-based emissions factor	✓
GreenPower	X	✓
PPA	X	✓
Local renewable energy generation (consumed and LGCs retired if large system)	✓	✓
Local renewable energy generation (exported energy)	X	✓
Jurisdictional renewable energy target	X	✓
Carbon neutral electricity	✓	✓

As Council is retiring the LGCs generated from their solar PV system and exporting energy to the grid as well, it is suggested to use the market-based approach when developing the Climate Active-compliant carbon inventory to claim any reduction in their electricity emissions.

Azility currently does not cater for the market-based approach.

5.1.2 LPG - stationary

Currently, there are 4 LPG accounts in Azility, and all accounts have complete data. A summary table below shows the results of the quality analysis of the LPG data in Azility.

TABLE 9: QUALITY ANALYSIS OF LPG DATA IN AZILITY

Summary				
Total no. of LPG accounts				4
No. of accounts with complete data				4
No. of accounts with estimated data				0
	Total consumption	Actual consumption	Estimated consumption	% actual data
Total consumption	17,536.0 L	17,536.0 L	0.0 L	100.00%

The LPG-stationary emission factor used by Azility is the same as Climate Active's scope 1 emission factor, but the scope 3 is slightly different as shown in the table below.

TABLE 10: LPG-STATIONARY EMISSION FACTORS COMPARISON (AZILITY VS CLIMATE ACTIVE)

Emission source	Emission factors used by Azility (kg CO ₂ -e/GJ or kWh)			Climate Active factors (kg CO ₂ -e/GJ or kWh)			Assessment
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	
LPG-stationary	60.60		5.00	60.60		3.60	Scope 3 EF is not the same.

The LPG-stationary conversion factor used by Azility is the same as Climate Active's conversion factor as shown in the table below.

TABLE 11: LPG-STATIONARY CONVERSION FACTOR COMPARISON (AZILITY VS CLIMATE ACTIVE)

Emission Source	Energy Content Factor used by Azility (GJ/L)	Climate Active Energy Content Factor (GJ/L)	Assessment
LPG-stationary	0.0257	0.0257	Same conversion factor

5.1.3 Fuel

Council's fuel consumption comes from fleet vehicles, and all accounts have complete data. Fleet vehicles use either diesel, petrol and E10 while the depot uses diesel and petrol only. The quality analysis of Council's fuel data is shown in the table below.

TABLE 12: QUALITY ANALYSIS OF ELECTRICITY DATA IN AZILITY

Summary				
Diesel				365,498.0 L
Petrol				102,091.6 L
Ethanol				6,362.4 L
	Total consumption	Actual consumption	Estimated consumption	% actual data
Fleet				
Diesel	115,640.0 L	115,640.0 L	0.0 L	100%
Premium ULP	11,834.0 L	11,834.0 L	0.0 L	100%
ULP	30,976.0 L	30,976.0 L	0.0 L	100%
E10	63,624.0 L	63,624.0 L	0.0 L	100%
Depot				
Diesel	249,858.0 L	249,858.0 L	0.0 L	100%
ULP	2,020.0 L	2,020.0 L	0.0 L	100%

The comparison of the fuel emission factors used by Azility compared to Climate Active is shown in the table below. It seems that Azility is using 2019 NGA factors as the diesel emission factor is consistent with this version. The latest published NGA factors have changes in several emission factors, such as diesel, due to an update in methodology used.

TABLE 13: FUEL EMISSION FACTORS COMPARISON (AZILITY VS CLIMATE ACTIVE)

Emission source	Emission factors used by Azility (kg CO ₂ -e/GJ or kWh)			Climate Active factors (kg CO ₂ -e/GJ or kWh)			Assessment
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	
Diesel	70.51		3.60	70.41		3.60	Scope 1 EF is slightly different.
Petrol	67.62		3.60	67.62		3.60	Same EF used.
E10	60.86		8.70	60.90		3.60	EF used is slightly different

The fuel conversion factors used by Azility are the same as Climate Active's conversion factor as shown in the table below.

TABLE 14: FUEL CONVERSION FACTOR COMPARISON (AZILITY VS CLIMATE ACTIVE)

Emission source	Energy Content Factor used by Azility (GJ/L)	Climate Active Energy Content Factor (GJ/L)	Assessment
Diesel	0.03860	0.03860	Same conversion factor
Petrol	0.03420	0.03420	Same conversion factor
E10	0.03312	0.03312	Same conversion factor

Council advised that there are three permanent generators at sewerage treatment sites and one mobile generator. The consumption of these diesel generators is accounted for in the depot fuel consumption. For proper categorisation in the Climate Active-compliant inventory, Council may consider separating the fuel consumption of these generators, as it should be classified under 'Diesel – stationary' which has a slightly different emission factor. Council can estimate the diesel consumption for the generators.

The comparison of the two different diesel emission factors is shown below.

TABLE 15: COMPARISON OF CLIMATE ACTIVE'S DIESEL FLEET AND STATIONARY EMISSION FACTORS

Emission Category	Emission source	Scope 1 EF	Scope 3 EF
Land and Sea Transport (fuel)	Diesel oil post-2004 (GJ)	70.41	3.60
Stationary Energy	Diesel oil (GJ)	70.20	3.60

5.1.4 Water

As LGA's water supply is supplied by Rous County Council's water treatment plants, Council needs to account for its operational water consumption under scope 3. Currently, Azility does not record any water consumption of Byron Shire Council. Council can use Azility's capability to record water data to maximise its potential.

5.1.5 Wastewater

On the other hand, the LGA's wastewater is treated in Byron Shire Council's sewage treatment plants. Hence, emissions from LGA's wastewater treatment should be accounted for under Council's scope 1 emissions. Azility records this data as shown in the table below.

TABLE 16: COUNCIL'S WASTEWATER EMISSIONS

Summary				
Wastewater emissions				1,044.00 t CO ₂ -e
	Total consumption	Actual consumption	Estimated consumption	% actual data
Bangalow STP	114.00 t CO ₂ -e	114.00 t CO ₂ -e	0.00 t CO ₂ -e	100.00%
Brunswick Valley STP	140.00 t CO ₂ -e	140.00 t CO ₂ -e	0.00 t CO ₂ -e	100.00%
Ocean Shores STP	544.00 t CO ₂ -e	544.00 t CO ₂ -e	0.00 t CO ₂ -e	100.00%
West Byron STP	246.00 t CO ₂ -e	246.00 t CO ₂ -e	0.00 t CO ₂ -e	100.00%

5.2 Other scope 1 and scope 2 emission sources

5.2.1 Refrigerants

Currently, Council has a list of air conditioning units, supplied by the air conditioning contractor, but without the kg charge. The contractors advised that most of the air conditioning units use R22 gas and that a few units recently changed to R10.

In preparation for developing a Climate Active-compliant inventory, Council should ask their contractor to provide the kg charge for each system and identify the correct refrigerant used per system. If this is not possible, then refrigerant emissions can be estimated.

5.2.2 Greenhouse gas emission inventory 2015-16 to 2025-26 tool

Council has developed a sustainability reporting tool for internal use. 100% Renewables reviewed the methodology used in this tool and assessed its compliance with the Climate Active Standard.

The emission factors used for electricity, streetlights, fuel, and LPG are aligned with the scope 1 and 2 Climate Active emission factors.

Climate Active's emission factor for green waste (composting) differs slightly from the one Council uses. Council can either proceed using the NGA factor as a bespoke emission factor when reporting under the Climate Active Standard, or it will have to adjust its emission factor to align with Climate Active. Further discussion with the Climate Active team will be needed.

Council can use the bespoke emission factors used to calculate the emissions from the closed landfill site, as well as for wastewater.

In the future, Council can consider updating the tool to include scope 3 emissions as well.

6 Suggested framework for capturing GHG emissions data and reporting emissions

An important element of managing the *Climate Active* carbon neutral commitment is the framework, systems and processes that are in place to effectively compile the carbon footprint. Council must be able to track how it has measured its emissions, including where the activity data comes from, how it is recorded, how any data quality improvement plans are implemented, and how any changes attributable to activities are identified and recorded. This information will be requested by the auditor and the Department.

Information relating to data activity levels, emission factors, processes, operations, estimation methodologies, inventory processes and systems and documentation systems is critical to producing a high-quality carbon footprint.

As of 2021, Council uses Azility, a software system that can produce reports that detail the resource consumption and the associated carbon footprint. Energy and water data relevant to Climate Active can be recorded in this system. The data is currently being automatically uploaded; however, water data is not available.

To ensure a smooth process for Climate Active accreditation, Council would need to find a way to consistently obtain and upload the additional scope 3 information that Climate Active requires. Examples of emission sources that would need to be regularly added to the database for tracking organisational sustainability are:

- Refrigerant emissions.
- PopCar
- Tracking of air travel
- Tracking of expenses like paper consumption, food and catering, postage, IT and office equipment purchases, business accommodation, telecommunication, advertising, cleaning expenses, chemicals, professional services. A VBA code in Excel could be developed to extract the expenses of the relevant account codes from the Finance extract file.
- Tracking of waste and green waste data throughout the organisation
- Tracking of yearly FTE numbers
- Employee surveys for staff commute information, which could be conducted every two years

Council may consider expanding the existing internal GHG reporting tool to include other emission sources. Council would also need to assign a staff member responsibility for obtaining the relevant data and uploading it to the management system or reporting tool.

The table below shows how currently reported emission sources are tracked, the extra effort required for recording additional emission sources, and suggested improvements in reporting a Climate Active-compliant footprint across Council:

TABLE 17: SOURCE OF ACTIVITY DATA AND EXTRA EFFORT REQUIRED

Emission source	Source of activity data	Extra effort required	Suggested improvement in data collection
Refrigerants	External contractors	Request information from external contractors.	Council should request a report with the refrigerant and corresponding charge in kg of all the AC systems from external contractors.
LPG – stationary	Azility	Consolidation of available data in Azility.	-
Diesel - stationary	Azility	Consolidation of available data in Azility. Currently, stationary diesel consumption is included in the bulk fuel data. Fuel use can be estimated for the generators.	Council needs to develop a methodology to account the diesel consumption for the generators. An Excel sheet could be used for this.
Fleet vehicles diesel	Azility	Consolidation of available data in Azility.	-
Fleet vehicles petrol	Azility	Consolidation of available data in Azility.	-
Fleet vehicles ethanol	Azility	Consolidation of available data in Azility.	-
Closed landfill	Internal GHG reporting tool/commissioned report	Extract information from the internal GHG reporting tool or from the report commissioned to estimate the fugitive emissions from the closed landfill.	-
Wastewater	Internal GHG reporting tool/Waste Water services team	Extract information from the internal GHG reporting tool or from the Waste Water services team	-
Electricity	Azility	Consolidation of available data in Azility.	-
Streetlighting	Azility	Consolidation of available data in Azility.	-
LGCs retired	External contractors	Request information from Photon Energy.	-
Solar consumption and export	Solar Analytics and Fronius website	Solar data in Solar Analytics can only be accessed through the registered email address.	Access to Solar Analytics data could be limited. Council could create an Excel database for all solar data for easy transfer of information.
Scope 3 facilities	Internal	Request list from the department handling leased-out sites	Council may consider creating an Excel database with NMIs (meter numbers)

Emission source	Source of activity data	Extra effort required	Suggested improvement in data collection
			to monitor the energy consumption of these sites and to confirm if these are already accounted for in Azility.
Water	Water supplier	Request bills from Rous County Council.	Council may consider using Azility's capability in capturing this data.
Fuel use recycled waste trucks	External contractors	Request fuel consumption data from Solo.	-
Paper	External supplier reports	Request reports from external suppliers	-
(IT) equipment	Finance department	Request information from the Finance department.	-
IT software	Finance department	Request information from the Finance department.	-
Office equipment	Finance department	Request information from the Finance department.	-
Food and catering	Finance department	Request information from the Finance department.	-
Postage and couriers	Finance department	Request information from the Finance department.	-
PopCar	PopCar	Request for reports from PopCar	-
Waste from Council operations	External contractor	Request reports from Solo	Council advised that waste emissions are being offset, but it is important to keep track of the tonnes of waste as Climate Active requires reporting the underlying activity data, even if the emission source is offset.
Green waste	Internal GHG reporting tool/Waste services team	Extract information from the internal GHG reporting tool or from the Waste services team	-
Air travel	Finance department	Request information from the Finance department.	Council advised that collecting air travel data is difficult. Council may consider to outsource the flight booking to a travel agency as an agency may be able to provide reports.
Business accommodation	Finance department	Request information from the Finance department.	Similar to air travel, the travel agency may also be able to provide a report on

Emission source	Source of activity data	Extra effort required	Suggested improvement in data collection
			business accommodation.
Employee commute	Employee commute survey	Refer to the latest employee commute survey.	Council advised that most of their employees are using cars to go to work. To clarify, travel from home to work is considered as being employee commute. Council may consider conducting an employee commute survey to obtain a better picture on staff commute emissions.
Telecommunications	Finance department	Request information from the Finance department.	
Cleaning supplies	Finance department	Request information from the Finance department.	
Cleaning services	Finance department	Request information from the Finance department.	-
Stationery	Finance department	Request information from the Finance department.	-
Chemicals	Finance department	Request information from the Finance department.	-
Entertainment	Finance department	Request information from the Finance department.	-
Business services	Finance department	Request information from the Finance department.	-
Advertising	Finance department	Request information from the Finance department.	-
Legal fees	Finance department	Request information from the Finance department.	-
Education and training	Finance department	Request information from the Finance department.	-
Asphalt	Finance department	Request information from the Finance department.	-
Concrete	Finance department	Request information from the Finance department.	-
Other road-building materials	Finance department	Request information from the Finance department.	-
Machinery and vehicle repairs	Finance department	Request information from the Finance department.	-
Equipment hire	Finance department	Request information from the Finance department.	-
Clothing	Finance department	Request information from the Finance department.	-
Hire cars	Finance department	Request detailed extract and need to go through it manually.	This emission source can be classified under 'non-quantified' emission sources.

Emission source	Source of activity data	Extra effort required	Suggested improvement in data collection
			Therefore, there is no need to collect the data.

It is also noted that the finance extract provided does not capture some of the emission sources in the boundary. Further detailed line-by-line analysis of the data may be warranted to determine the total expenditure for these emission sources. Alternatively, Council may consider updating the Finance coding system to capture Climate Active related expenses.

Due to the complexities of the calculations involved, these tasks should ideally be performed by an individual with a high standard of carbon accounting knowledge, preferably with prior Climate Active experience. It should be noted that verification fees can potentially increase if the Climate Active documentation is handled by someone without Climate Active experience.

Appendix A: Steps to become carbon neutral under Climate Active

The following diagram shows the steps that Council needs to take to become certified under Climate Active. Most of these steps need to be completed annually.



FIGURE 8: STEPS TO BECOME CARBON-NEUTRAL-CERTIFIED UNDER CLIMATE ACTIVE

Under Climate Active, Council has the following responsibilities:

- Sign Licence Agreement
- Pay annual fee
- Engage auditor/verifier
- Complete report or provide all data to Registered Consultant (please note that 100% Renewables is a Registered Consultant)
- Purchase offsets
- Sign PDS and submit report
- Submit web profile
- Use trademark correctly

The following sections go into the details of each individual step.

A.1 Review organisational and operational boundary

At the time Council seeks carbon neutral certification, the organisational and operational boundary needs to be re-evaluated and updated if changes have occurred.

A.2 Gather emissions data

Collate your emissions data and renewable energy used or generated.

A.3 Describe emission reduction strategy

Describe Council's emissions reduction strategy.

A.4 Complete the registration form in the Climate Active Certification Portal

A *Registered Consultant*¹ can help with the application. A list of Registered Consultants is available [here](#). Please note that 100% Renewables is a Registered Consultant.

To access the Climate Active certification portal, Council needs to register with the Department of Industry, Science, Energy and Resources community portal. Instructions are available [here](#).

The Climate Active certification portal is available [here](#).

A.5 Pay licence fees

Once the application is ready, Council will get a message to sign the Licence Agreement in the Climate Active certification portal. Council will also need to pay the invoice for the certification fees.

A.6 Prepare the report

The Department has made available an Excel spreadsheet which is used in reporting under Climate Active. A Registered Consultant can help to prepare the carbon account in this sheet, which is recommended if Council does not have in-house expertise in carbon accounting.

The Excel spreadsheet provides emission factors for several hundred common emission sources. The sheet also provides some simple calculators to estimate activity data. Carbon inventories should use the provided emission factors in the tool whenever a relevant and suitably accurate emission factor is available.

A.7 Third-party validation

Independent third-party validation ensures the accuracy and completeness of carbon calculations, including the appropriateness of emissions boundaries, methodologies and calculations.

The first review (of the base year) must include an assessment of the adequacy and appropriateness of the emissions boundary setting, emissions methodologies and emission factors.

Under Climate Active, Council will most likely be either a *Medium* Organisation (carbon footprint < 25,000 t CO₂-e) or a *Large* Organisation (carbon footprint ≥ 25,000 t CO₂-e). As such, Council needs to undertake a *Type 1* or *Type 2* third-party validation, respectively, and a technical assessment.

Type 1 validations can be prepared by:

- A Registered Greenhouse and Energy Auditor ([register available here](#));
- A chartered accountant ([register available here](#));
- A certified practising accountant ([register available here](#)); or
- An environmental auditor accredited under international standard ISO 14001.

While Type 2 validations can be prepared by:

- A Registered Greenhouse and Energy Auditor ([register available here](#));

¹ Please note that Barbara Albert and Joseph Gregorio from 100% Renewables are 'registered consultants' and that 100% Renewables can help you with completing the registration on the portal.

- An auditor accredited to the international standard ISO 14065:2013.

If Council prepares its own carbon account, then Council will need to engage a Registered Consultant to conduct a *Technical Assessment* and engage a qualified person to complete a *source data verification*. The source data audit may be prepared by the same person that completed the technical assessment (subject to them holding the relevant qualifications).

If a Registered Consultant prepared the account, there only needs to be a Type 1 or Type 2 third-party validation (*independent data audit*) which must not be performed by the same person that prepared the carbon account.

A.8 Purchase offsets

After successful validation, carbon offsets need to be purchased. Council will need to purchase carbon offset units either to offset the base year or forward offset the first year of certification.

Council will also need to complete and sign a Public Disclosure Statement.

Council will then need to submit the carbon account, third party validation and Public Disclosure Statement (including proof of offsets) to the Climate Active team via the online portal.

A.9 Certification and use of the Climate Active trademark in marketing materials

Once the report has been approved, Council will receive a notice of initial certification. Once Council has received this, it can use the certification trademark in accordance with the Licence Agreement.



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