A Carbon Management & Performance Register for the Bay of Plenty Community Trust (BayTrust)

---

v1.0
11 May 2021

Table of Contents

1. Objective of this document 3
2. Background 3
3. Base Year (FY20) 3
   3.1. Base Year objectives 3
   3.2. Base Year Scope 3
   3.3. Data collection and processing 4
   3.4. Data uncertainty and assumptions 4
   3.5. Omissions 5
   3.6. Verification 5
   3.7. Base Year footprint 5
   3.8. Hotspot assessment 6
4. Management approach 6
   4.1. Reduction strategy and targets 6
   4.2. Offsetting strategy and targets 8
   4.3. Annual review 9
5. Year 2 (FY21) 9
   6.1. Base Year objectives 9
   6.2. Year 2 Scope 9
   6.3. Data collection and processing 10
   6.4. Data uncertainty and assumptions 10
   6.5. Omissions 10
   6.6. Verification 10
   6.7. Year 2 (FY21) footprint 10
   6.8. Performance against the reduction target 11
   6.9. Carbon inset programme scoping 12

.

1. Objective of this document

This document was first prepared in August 2020. The objective of the document is to capture the organisation's carbon management plan and to register performance and progress against the plan. It is a living document that will be updated annually.

2. Background

The Bay of Plenty Community Trust (BayTrust) has undertaken measurement of its first carbon footprint (its Base Year measurement). The reporting period is 1 April 2019 – 31 March 2020. Below we summarise scope, agreed omissions, the Base Year footprint and carbon "hotspots". Reduction and offset targets are proposed, and a strategy for achieving these targets is presented for consideration.

3. Base Year (FY20)

In 2020 BayTrust undertook the first measurement of its organisational carbon footprint. The reporting period was 1 April 2019 – 31 March 2020.

Below we present the scope of the first measurement and the outcomes.

3.1. Base Year objectives

- Calculate the Base Year carbon footprint
- Set a reduction target
- Develop and begin implementing the reduction strategy

3.2. Base Year Scope

The Base Year scope was set as follows:

3.2.1. Organisational boundary

BayTrust operates from a single site in Tauranga

- Level 1, 752 Cameron Road, Tauranga

It is the activities that take place within this site, and activities associated to the function of this site BayTrust has operational control over, that constitutes the organisational boundary.

3.2.2. Operational boundary

Emission sources

Scope 1

- Refrigerant gases lost from air conditioning units in the office
- Transport fuel combusted in company cars
    - Toyota Prius 2018

- Toyota RAV 4 Hybrid 2020

Scope 2

- Emissions associated with the consumption of purchase electricity

Scope 3 agreed for inclusion

- Air travel
- Taxi travel
- Accommodation
- Private vehicle use for business activity (by the 3 staff members without a company car and the 12 trustees)
- Rental car use
- Waste sent to landfill
- Emissions associated with commuting to work (5 staff)

Carbon removal sources

Operations at BayTrust do not remove CO_2 or other GHGs.

3.3. Data collection and processing

Data was collected by Lisa Hickling, BayTrust Administration Manager and entered into the bespoke BayTrust carbon calculator (MS Excel tool created by Catalyst Ltd).

3.4. Data uncertainty and assumptions

3.4.1. Assumptions

The following assumptions have been made:

- Office waste is disposed of at the Hampton Downs landfill. All Tauranga waste goes to landfills in the Waikato two of which recover the landfill emissions and two do not. Hampton Downs Landfill is one that recovers the gas. It is the closest of the four to Tauranga.

- Uber tariffs are the same as taxi tarriffs.

- Trustees personal vehicles are all petrol, except for Judy's Mazda Demio (assumed diesel) and Simon's full EV.

3.4.2. Uncertainty

- Activity data as entered into the tool is reliant on supplier invoices being accurate. There is no reason to question the accuracy of data in the statements and/or invoices providing data however

- The calculation of emissions from transport fuels relies on emission factors that have inherent uncertainties associated with their calculation ranging from 0.9% - 1.8%.

3.5. Omissions

Omitted from the Base Year measurement boundary are the following Scope 3 emission sources.

- Capital goods
- Fuel and energy related activities (being the extraction, production and transport of fuels and energy to the reporting organization)
- Purchased goods and services (eg office supplies)
- Processing sold products (being downstream processing of product sold by customers)
- Use of sold products
- End of life treatment of sold products
- Upstream leased assets
- Downstream leased assets
- Investments
- Franchises

These Scope 3 emission sources have been omitted as they are not relevant to the organization or emissions are *de minimis*. The exception being investments. BayTrust has an extensive investment portfolio. Understanding the carbon footprint of these investments is a focus elsewhere within the trust's Climate Change Action Plan.

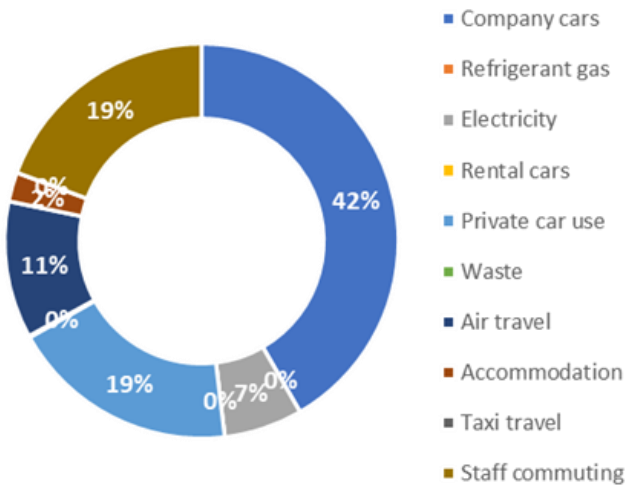
3.6. Verification

This measurement has not been independently verified.

3.7. Base Year footprint

Scope	GHG type	tonnes CO_2e
1	CO_2	6.52
	CH_4	0.08
	N_2O	0.22
	HFC, PFC, HF_6	0.00
	Total (Scope 1)	**6.82**
2	CO_2e	1.06
	Total (Scope 2)	**1.06**
3	CO_2e	8.49
	Total (Scope 3)	**8.49**
	GRAND TOTAL	**16.36**

3.8. Hotspot assessment



- 42% of emissions were from direct (Scope 1) sources, being fuel combusted in company owned vehicles
- 6% of total emissions arose from the use of purchased electricity (Scope 2).
- All remaining emissions (52%) were from indirect sources (Scope 3) and included emissions from private car business use (19% total), staff commuting (19% total), business air travel (11% total) and waste sent to landfill and accommodation (<2% total, combined).

4. Management approach

4.1. Reduction strategy and targets

BayTrust is measuring its carbon footprint with a view to reducing it where possible and offsetting the remainder. A strategy focussing on hotspots will assist in meeting this goal.

In setting a reduction target, two approaches have been considered:

a. A target based on science which is likely to be ambitious
b. A target that BayTrust can confidently achieve

4.1.1. Science based targets

Using the Science Based Targets Initiative (SBTi) target setting tool, the following targets support limiting global warming to 1.5°C above pre-industrial levels, the level identified as needed to substantially reduce the risks and impacts of climate change.

- 22% reduction by 2025
- 42% reduction by 2030
- 64% reduction by 2035

These are against Base Year (2020) levels. They equate to an annual reduction of approx. 4.2%.

4.1.2. A more achievable target

There is little scope for significant reductions within the BayTrust operation given the nature of the business and the source of the company's emissions. With this in mind a more conservative reduction target might be considered. Something like

- 10% reduction by 2025
- 20% reduction by 2030
- 30% reduction by 2035, all against 2020 levels.

This equates to a 2% reduction annually.

4.1.3. Agreed target

BayTrust is not afraid to set an ambitious target. In line with the targets calculated using the SBTi tool, BayTrust has confirmed the following as its target:

- **5% reduction per annum against 2020 levels**

With a target confirmed, BayTrust needs to develop a programme of projects to bring its carbon footprint down sufficiently to meet or exceed the target. This will likely involve dealing with the low hanging fruit initially, followed by a transition to process changes and system changes over a period of years once the low hanging fruit is dealt with. Below we list some projects for consideration.

4.1.4. Low hanging fruit

Transition to more efficient company cars
BayTrust owns two vehicles for business use. Although these are modern plug in hybrids, they still generate emissions through the combustion of petrol/diesel. A move to full EVs when these vehicles are due to be replaced could see emissions drop by as much as 40%.

4.1.5. Process and system changes

Changes to the way you hold meetings
There may be scope within the BayTrust business model to reduce the number of face to face meetings involving travel. As telecommunication technology improves remote meetings via video conferencing will be more reliable with improved quality, potentially reducing the need for meetings in person (notwithstanding the fact that some face to face meetings are unavoidable).

Carpooling and use of public transport or bikes
Staff commuting has been included in the scope of the footprint measurement and it accounts for 19% total emissions. If staff can be encouraged to reduce their reliance on taking cars to work, through carpooling, use of public transport or biking, this may have a significant impact on reducing the footprint.

4.2. Offsetting strategy and targets

Offsetting options for BayTrust include

- The purchase of verified high quality carbon credits. In considering this, we recommend you keep it local ie don't purchase from overseas schemes. Consider EKOS.
- Investing in its own planting programme (often referred to as insetting). Will need land and/or a partner, and modelling to determine number of plantings and offset timing.

Staff favour the latter over the former however self-planting/insetting programmes come with challenges. Firstly land needs to be sourced and purchased. The land must be large enough to carry sufficient trees to sequester CO_2 at sufficient rates in meaningful timeframes. Another consideration is the land's history. Under Kyoto Protocol accounting rules land that was forest as at 31 Dec 1989 cannot be used to provide forest offsets.

As well as choosing the offset approach, BayTrust must consider timing and the overall objective of the strategy. Questions to be answered are

- Which part of the footprint needs to be offset?
- What is the timing of the offset(s)?

To offset its current footprint with purchased credits BayTrust would need to invest approx. $550 based on its Base Year footprint and a carbon price of $34 per tonne CO_2 (price as of August 2020). If it wants to be carbon neutral immediately this is the approach we recommend.

In future years carbon neutrality can be achieved through insetting. The advantage of insetting is that BayTrust will produce its own NZUs at cost rather than purchase offsets at the going rate in the market - a rate that has a risk of rising significantly in the coming decade due to the NZ forest industry moving into a major phase of harvesting. A formal insetting programme will be needed to accurately manage and calculate the generation of NZUs. To assist with this we recommend the services of Sean Weaver, EKOS.

As an estimate, based on modelled sequestration data for regenerating native forest (MAF look up tables for indigenous forest[1]), you could expect the following credits from insetting as stipulated above:

Years into regeneration	Tonnes CO_2 sequestered per Ha
5	8
10	31
15	52
20	94
30	127
40	142

To put these figures into perspective, starting with bare land today, 10 hectares of land would require a little over two years of regeneration to offset the Base Year footprint alone. During this time you would have emitted further emissions. Assuming a slight annual decrease in emissions each year, it would take these 10 hectares approx. 5 years of growing to offset all emissions generated over the 5 year

[1] https://www.teururakau.govt.nz/dmsdocument/6979-Look-Up-Tables-for-Post-1989-Forest-Land-in-the-ETS

timeframe. Thereafter, the forest will be removing more carbon than the organisation is omitting each year.

Note that the level of investment with this approach is variable. If purchasing the land required this can be a significant upfront cost. Depending on location and proximity to a seed source, additional investment might be needed for planting (as opposed to letting nature take its course), land management and pest management. The latter two potential costs relate to weed control (if needed), fencing, baiting and trapping.

4.3. Annual review

Each year the scope of the footprint should be reviewed and revised if required. As new acquisitions are made or as changes to the organisational structure occur, the scope must be modified to reflect these changes.

As well as accounting for organisational boundary changes, the footprint's scope should be reviewed for operational changes. If new emission sources arise, and carbon sinks arise or credits are purchased, these will need to be included.

Each year also the emission factors used in the calculations should be updated. Most emission factors will not change however electricity factors do change year on year as the source of national grid electricity changes (eg in the amount of renewables versus coal and oil derived electricity). These must be noted and changes to the calculator made.

In addition to reviewing the footprint's scope and methodology, each year it is advisable to review and update the Carbon Management Plan. Progress against targets should be tracked and the plan amended where needed.

5. Year 2 (FY21)

Below we present the scope of the second year footprint measurement and the outcomes.

5.1. Base Year objectives

- Calculate the Year 2 carbon footprint
- Asses progress against the reduction target
- Scope the offsetting/insetting programme

5.2. Year 2 Scope

5.2.1. Organisational boundary

No change from the Base Year other than inclusion of two new trustees and updates to the vehicle details for one of the other trustees.

5.2.2. Operational boundary

No change from the Base Year other than the inclusion of Working from Home as a Scope 3 emission source. It was deemed this was necessary on account of staff working significant hours at home in 2020 as a result of Covid 19.

5.3. Data collection and processing

Data was collected by Lisa Hickling, BayTrust Administration Manager and entered into the bespoke BayTrust carbon calculator (MS Excel tool created by Catalyst Ltd).

5.4. Data uncertainty and assumptions

5.4.1. Assumptions

As listed for the Base Year.

5.4.2. Uncertainty

As listed for the Base Year.

5.5. Omissions

Omitted emission sources in FY21 are the same as listed for the Base Year.

5.6. Verification

This measurement has not been independently verified.

5.7. Year 2 (FY21) footprint

Scope	GHG type	tonnes CO_2e
1	CO_2	5.47
	CH_4	0.06
	N_2O	0.19
	HFC, PFC, HF_6	0.00
	Total (Scope 1)	**5.72**
2	CO_2e	0.73
	Total (Scope 2)	**0.73**
3	CO_2e	4.65
	Total (Scope 3)	**4.65**
	GRAND TOTAL	**11.10**

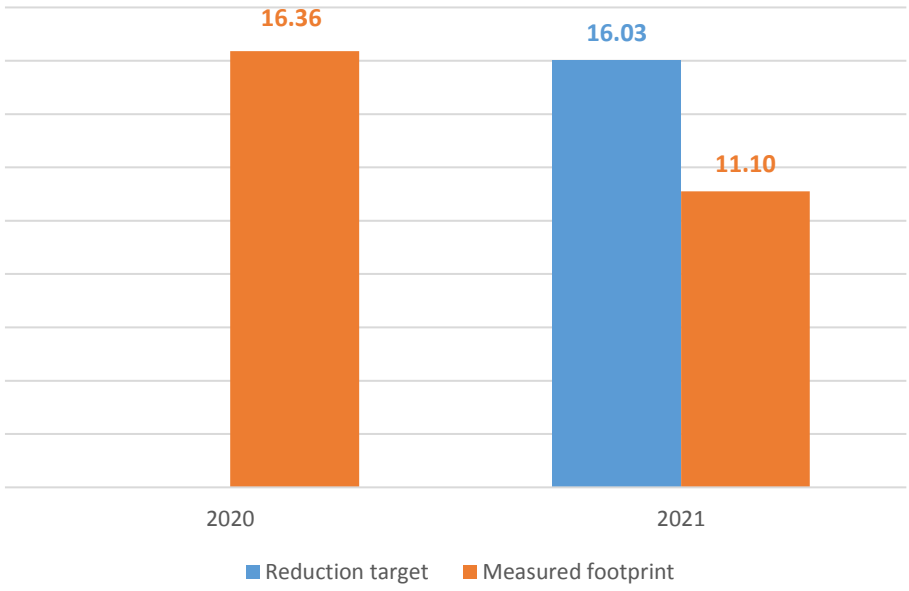
5.8. Performance against the reduction target

Absolute GHG emissions in FY21 were 11.10 tonnes CO_2e. This is a 32% decrease on FY20 Base Year levels.

Intensity GHG emissions in FY21 were 2.40 tonnes CO_2e per FTE. This is a 33 % decrease on FY20 Base Year levels.

	FY21	FY20
Scope 1	5.72	6.82
Scope 2	0.73	1.06
Scope 3	4.65	8.49
Total gross GHG emissions (t CO2e)	**11.10**	**16.36**
GHG removals	0	0
Carbon credits/offsets purchased	0	0
Total net GHG emissions (t CO2e)	**11.10**	**16.36**
Total net GHG emissions per FTE (t CO2e/FTE)	2.40	3.56

In terms of progress against the reduction target, Bay Trust is well on track as the diagram below demonstrates. The dramatic drop in emissions in FY21 can be attributed in large to Covid-19. In April 2020 there was no business activity due to lockdown and levels of activity through the remainder of the year were less than normal. Implementation of the organisation's carbon reduction strategy may also be a factor in the reduction.



5.9. Carbon inset programme scoping

BayTrust is working with EKOS on the development of a Bay of Plenty insetting programme. The vision is for BayTrust to co-invest in and oversee a series of conservation and reforestation projects across the region that will provide BayTrust, its grantees and business across the BOP a source locally produced carbon credits.

Co benefits of the programme include growing biodiversity across the region, providing landowners with sustainable low impact income sources, local income generation and employment and good returns for investors.

An initial workshop has been held with local key stakeholders to gauge interest which was very positive. The next steps are to determine the special purpose vehicle for investors and establish the levels of supply and demand.