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**Committee** Council  
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## Setting a carbon neutrality target for GWRC

### 1. Purpose

To seek approval to set a target for Greater Wellington Regional Council (GWRC) as an organisation to become ‘carbon neutral’.

The report also outlines the costs of inaction and an initial plan of action to accelerate progress on carbon reduction and carbon sequestration in line with this target.

### 2. Background

The Government has expressed an ambition for New Zealand to have net zero greenhouse gas emissions (or become ‘carbon-neutral’, as it is also known) by 2050, reflecting the goal of the 2015 Paris Agreement. It is working towards passing the Climate Change Response (Zero Carbon) Amendment Bill that will help give effect to this through putting a target of this kind in law. The Bill will set a series of emissions budgets to act as stepping stones towards the long-term target and require national emissions reduction plans. The Intergovernmental Panel on Climate Change warned in their special report in October last year that unless global emissions drop steeply now, the opportunity to avoid the worst effects of climate change will be lost.

Some organisations have already acted to either set carbon neutrality goals, such as NZ Post and Christchurch City Council have for 2030, or achieved them, such as the Warehouse Group. This reflects their desire to demonstrate leadership on climate change and to reduce the related risks to their organisations (of regulation of emissions, to their reputation and from climate change itself).

Councillors discussed carbon trading and offsetting options within this context at an Environment Committee workshop in October 2018. Councillors expressed:

\* A desire to further explore carbon neutrality of its corporate emissions footprint including offsetting, in full knowledge that this would present an opportunity cost (from the foregone sale of emissions units) and potentially an actual direct cost (to purchase additional units).

\* A desire to explore increasing GWRC's supply of emissions units by planting forests on GWRC owned land.

\* Acknowledgement that GWRC needs to work towards including their suppliers' (bus contracts in particular) and potentially CCO emissions in GWRC's corporate carbon footprint.

More recently, the GW Councillor Climate Change Working Group has discussed influencing and collaborating with CCOs (Wellington Water and WREDA), investments (e.g. CentrePort Wellington) and supplier contractors (bus and rail) to develop objectives relating to the measurement and reduction of greenhouse gas emissions.

A second councillor workshop on corporate carbon neutrality and reporting climate change related risks was held in March 2019. It was explained there that while the types of actions that would lead to carbon neutrality and their necessity were clear, providing definitive costing for them was not possible given how quickly technologies were developing and that the future price of carbon pollution could only be very broadly estimated. Setting a target based now on science and values would provide a focus for effort, but there needed to be a high level of buy-in to this throughout the organisation. The example of the process NZ Post used to set their carbon neutrality target was given.

At the 9 May 2019 Environment Committee meeting it was agreed that in order to set a carbon reduction or neutrality target for GWRC as an organisation, a day-long workshop would be held, involving both councillors, executive leadership and other staff working together to arrive at a consensus, following the a process similar to that of NZ Post.

On 9 August 2019, this workshop was held. It was attended by nine councillors, all of the executive leadership team, staff primarily responsible for emissions producing or mitigating parts of GWRC's operations, climate change specialists and designated staff sustainability champions – 40 people altogether.

It was facilitated by business journalist and sustainability commentator Rod Oram. During the morning there were presentations from Mr Oram, Dr Alex Pezza on the science of climate change, David Walsh and Dawn Baggaley of NZ Post and James Palmer, CEO of Hawkes Bay Regional Council.

The final presentation of the morning was on GWRC's carbon footprint, opportunities, pathways, scenarios and costs. This content is summarised below.

## What is carbon neutrality?

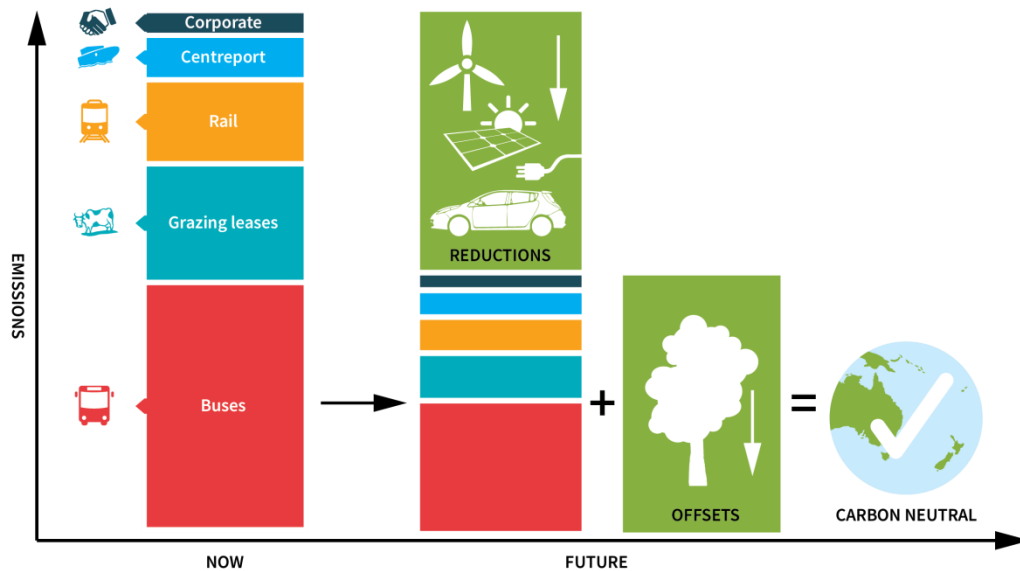
Put simply, carbon neutrality means achieving net-zero greenhouse gas ('carbon') emissions for an entity for a given period. It is a voluntary activity whereby an organisation takes responsibility for its carbon pollution. The process involves:

**Measuring** the carbon footprint (also known as the entity's annual greenhouse gas inventory). This includes deciding what activities are within scope.

**Verifying** the carbon footprint using an independent auditor, so emissions information is accurate and transparent to the public.

**Reducing** the carbon footprint, typically through improved energy conservation and efficiency, moving from fossil fuels to renewable energy sources and changing the type and intensity of land use. Other mitigation approaches may also be possible. To avoid the rising cost of carbon for all business, organisations need to continue to look for ways to change to low carbon service delivery.

**Offsetting** the remaining carbon footprint. As it is very difficult to achieve reductions of gross emissions to zero, offsetting is required. This is where projects that absorb emissions (or avoid emissions occurring outside the organisation's boundary, e.g. in another business or a developing countries) are undertaken to cancel out the entity's remaining footprint. Both of these activities are explained in the diagram below:



**Figure 1: Diagram showing how reductions and offsets bring net emissions to zero. As reductions take time to be achieved, the sooner carbon neutrality is sought, the greater the reliance on offsets will be.**

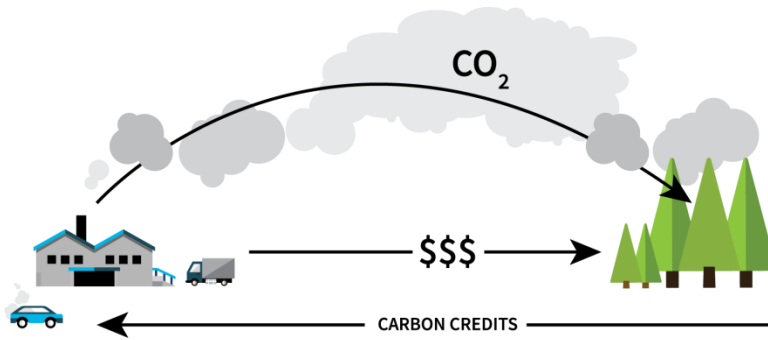


Figure 2: Simple carbon offsetting diagram. Carbon credits (also known as ‘emissions units’) are tradable units each representing a permit to emit one tonne of CO<sub>2</sub> equivalent greenhouse gas emissions.

### What is GWRC’s carbon footprint?

GWRC’s carbon footprint in 2017-18 was close to 33,000 tonnes of CO<sub>2</sub> equivalent, which is around 1% of the Region’s gross emissions. This includes core corporate activities, bus and rail contracts, CentrePort Wellington, given the nature of influence GWRC has over these. The emissions from the livestock and fertiliser use on approximately 2,000 hectares of grazed park land are included as this is GWRC managed land.

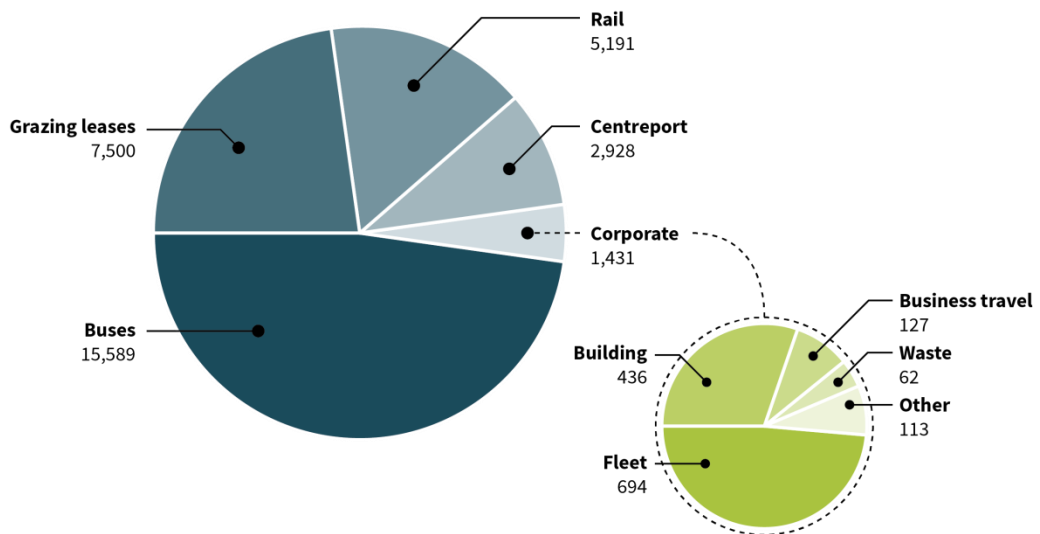


Figure 3: GWRC ‘group’ carbon footprint 2017-18

Of the five main areas of emissions, all except grazing emissions have increased since 2015, in particular buses. Grazing emissions in parks declined by 20% over the same period as land has been retired.

Emissions from GWRC-owned assets such as those Wellington Water manages and the Wellington Stadium may also be included in its carbon footprint (e.g. to meet a verified reporting standard), but sit outside this target-setting process given the shared decision-making responsibility GWRC has with other board members.

## What are the cost implications?

GWRC already possesses the following carbon credits:

**Table 1: Carbon credits currently held by GWRC**

	<b>Number of carbon units held</b>	<b>Assumed price</b>	<b>Estimated current value</b>
Free allocation for pre-1990 forests	322,873	\$25.00 each	\$8.07M
Permanent forests for 2008-17 period	67,213	\$31.25 each	\$2.10M
Total	390,086		\$10.17M

440 hectares of GWRC-owned forest were entered into the Government's Permanent Forests Sinks Initiative in 2012, with carbon credits for them claimed back to 2008. These forests have accumulated carbon at an average rate of 6,700 tonnes per year, although this will start to slow. Carbon credits from permanent forests currently attract a 25% premium compared to regular credits. GWRC was also given a one-off allocation of credits for its pre-1990 forests. Free allocation credits are not recommended to be used for offsetting because they do not represent additional removal of carbon dioxide from the atmosphere.

Using carbon credits to offset has a direct or opportunity cost. Increasing GWRC's supply of carbon credits (through additional planting) would also have a direct cost. However, reforestation on GWRC land is eligible for the Government's 'One Billion Trees' funding. If for any reason the credits GWRC generates aren't needed, they can be sold.

Regarding reductions, some measures will cost more than the status quo, others less. This also depends on the time horizon in question as higher upfront costs are often compensated for by lower ongoing costs (for example, electric vehicles). Key technologies such as solar photovoltaic systems and batteries are rapidly dropping in price, consistently faster than most forecasts. The illustrative scenarios for GWRC's future emissions include the cost of carbon for an assumed future carbon price (either to voluntarily offset or to pay in a mandatory compliance scheme) and the global social cost of the net carbon pollution to that would occur to the given date. These are in **Attachment 1**.

## What are the benefits?

Reducing emissions now reduces the risk of having to make more rapid, more costly, reductions in the future (i.e. because of regulation). High intensity emission assets might become 'stranded' due to prohibitive operating costs or outright bans. Reducing emissions sooner contributes to the collective global effort to limit emissions and the amount of global heating. It reduces the risks

involved in having to adapt to more severe and intense climate change impacts later on.

Establishing new permanent native forests (for offsets) within the region will have the additional benefits of reducing erosion, improved water quality, improved biodiversity and public amenity. However it is important to note though that reducing emissions needs to be prioritised over offsetting because:

- Reduction measures are generally more cost-effective, often reducing total cost over the whole life of the asset.
- Forests stop absorbing net carbon once fully grown. Continuing to offset this way means finding more land to plant. Suitable land will become harder and harder to come by.
- Carbon stored in forests must remain there indefinitely (centuries or more) but they are vulnerable over long periods, to harvesting for resource use and increasing threats as a result of climate change (exotic pests, disease, wildfires, storms etc.)

### **Illustrative scenarios for GWRC**

Three illustrative scenarios for the future of GWRC's emissions were developed to highlight what could be achieved for varying levels of ambition. These are in **Attachment 2**.

Two crucial determining factors for the overall level of achievement are the electrification of bus services and the retirement of grazing leases. Conceivably both of these emissions sources could be reduced by 90% by 2030, reducing total GWRC emissions by 75% in concert with other measures. To be successful, the rate of adoption of low emissions technologies and practices must exceed the rate of growth by a large margin. All other things being equal, organisational growth causes emissions to increase.

### **Consensus decision-making process**

In the second half of the special workshop day, delegates participated in a consensus building exercise. Given all they had heard in the first part of the day, individuals were asked to specify what they personally thought GWRC's carbon emissions reduction target should be; how much (gross or net) and by when. They could specify conditions, interim targets and provide further detail as they saw fit. Then they were asked to partner with one other person, discuss their respective targets and develop a consensus position together. The pairs then joined to form a group of four and repeat the process, and so on. Rod Oram and climate change staff played facilitation roles, rather than participate directly. Finally, two groups of sixteen delegates presented their agreed targets.

Both groups had individually agreed the primary target should be that GWRC become carbon neutral by 2030. There were slight differences in the supporting detail each proposed that were resolved through a final group discussion. The details agreed to recommend to council were that GWRC:

- Adopt an interim target of a 40% reduction in net emissions by 2025 (compared to 2018-19), increasing in a linear fashion to a 100% reduction in net emissions (ie, be carbon neutral) by 2030, and thereafter. As the targets are for net emissions, GWRC can use offsets to make up the difference between reduction in gross emissions and the targets if required.
- Set ‘carbon budgets’ for the financial years ending in 2020 to 2025 and 2026 to 2030 to track progress against and ensure that the council is on course to achieve its targets.
- Become ‘carbon negative’ by 2035. In practice this would mean that GWRC would both be carbon neutral and be able to sell excess carbon credits that it had generated from reforestation within the region.
- Accelerate its programme of work towards the target by selling its ‘free allocation’ carbon credits to create a dedicated funding stream, given it is not recommended that they be used for offsetting.

A summary of the costs of inaction on climate change is also outlined in **Attachment 2**. This was requested at Environment Committee on 9 May 2019.

### 3. Comment

The recommended target is feasible and commensurate with that of other organisations such as Christchurch City Council and NZ Post. The interim targets will ensure that net carbon pollution is constrained prior to 2030 (which is critical, as GWRC’s carbon emissions have risen sharply in recent years) and the use of free allocation units for funding the changes required will limit any impact on rates.

Based on the discussion and ideas collected during the 9 August workshop, officers have developed an initial ‘Corporate Carbon Neutrality Action Plan’ to move the organisation towards attainment of the 2030 target, should it be adopted by Council:

1. Introduce a carbon reduction policy for the organisation. Decisions must consider what impact they will have on the carbon target(s), with a strong bias towards those options that will avoid, reduce or absorb emissions. The carbon reduction policy will be reflected in procurement policy.
2. Allocate responsibility for corporate carbon emissions and attainment of the targets to the chief executive, with an associated performance indicator.
3. Investigate securing renewable electricity supplies for GWRC operations including via procurement, partnerships and/or direct investment.

4. Accelerate the implementation of an electric bus fleet in the region by 2030.
5. Adopt a target of a fully-electric corporate vehicle fleet by 2030 (if mature technology is available).
6. Investigate and evaluate options for off-road and high performance electric vehicles including through conversion, joint procurement or partnerships with manufacturers.
7. Allocate resources to accelerate reforestation planting in regional parks, plan future phases, secure external funding where possible and develop agreements with DOC regarding acquiring carbon credits associated with planting in Queen Elizabeth Park.
8. Review the future of grazing leases in regional parks as part of the review of the Parks Network Plan and options to use this land for native reforestation where appropriate to earn carbon credits.
9. Work with the Boards and executive of CCOs, in particular CentrePort Wellington to align their level of ambition and programmes for reducing emissions with that of GWRC.
10. Sell down the free allocation of carbon credits (NZUs) GWRC received for its pre-1990 forests to create a 'low carbon acceleration fund' to reduce the rates impact of this programme of work.

Further consideration and confirmation of these initiatives will form part of the 2020-21 Annual Plan process. Some of these initiatives may require further feasibility assessment and consultation with our communities.

#### **4. Communication**

As an outcome of this report a media release will be issued.

Formal communication with the Board of CentrePort Wellington and GW Holdings Ltd will be required to indicate Council's target and discussions held with management on the implications for their business. In the cases of WREDA, Wellington Water Ltd and the Wellington Stadium Trust, further discussion with the other partner councils will be undertaken to communicate GWRC's position and to develop a jointly agreed approach on carbon reduction goals. This will then need to be formally communicated to the respective governance bodies.

#### **5. Consideration of climate change**

The matters requiring decision in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

##### **5.1 Mitigation assessment**

Officers have considered the effect of the matter on the climate. Officers recommend that the matter directly affects GWRC's contribution to total



greenhouse gas emissions. Should the targets be achieved, and assuming annual emissions reduce linearly between now and the interim 2025 target, the total greenhouse gas emissions from GWRC from July 2018 onwards will be limited to approximately 231,000 tonnes in total with a global social cost of \$137 million.

These figures can be compared to the scenarios in Attachment 2 to explore what level of impact other courses of action would have. For example under Scenario A, cumulative emissions and global social cost to 2030 are 350,000 tonnes and \$209M respectively. Emissions and their impact continue to amass the later carbon neutral status is attained – for example if the neutrality target was 2040, they would increase to 525,000 tonnes and \$313M respectively under Scenario A.

Officers note that the matter does affect the Council's interests in the Emissions Trading Scheme (ETS) and the Permanent Forest Sink Initiative (PFSI), in that an increase in the area of land GWRC has in permanent forests has been mooted, and the carbon credits from such forests are administered through these schemes.

## **5.2 Adaptation assessment**

Officers have considered the impacts of climate change in relation to the matter. The issue of potential impacts of climate change on reforested areas, affecting the carbon stored there, has been highlighted. More generally the risks associated with climate impacts in relation to council taking action or not have been explored in some detail, including in Attachment 1.

## **6. The decision-making process and significance**

Officers recognise that the matters referenced in this report may have a high degree of importance to affected or interested parties.

The matters requiring decision in this report have been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act). Part 6 sets out the obligations of local authorities in relation to the making of decisions.

### **6.1 Significance of the decision**

Part 6 requires Greater Wellington Regional Council to consider the significance of the decision. The term 'significance' has a statutory definition set out in the Act.

Officers have considered the significance of the matter, taking the Council's significance and engagement policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance.

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

## 6.2 Engagement

Engagement on the matters contained in this report aligns with the level of significance assessed. In accordance with the significance and engagement policy, no engagement on the matters for decision is required.

## 7. Recommendations

*That the Council:*

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Adopts the following greenhouse gas (carbon) reduction targets for its corporate operations and areas of direct influence, using the 2018-19 year as a baseline:*
  - *40% net reduction in 2024-25 financial year*
  - *100% net reduction (carbon neutral) in 2029-30 financial year and thereafter*
  - *Become a net producer of carbon credits (carbon negative) by the 2034-35 financial year*
4. *Agrees that organisational carbon budgets be developed to guide emission reduction work and measure performance for the financial years ending in 2020 to 2025 and 2026 to 2030. The second budget will be equivalent to a linear reduction in net emissions between the 2025 and 2030 targets over the period.*
5. *Endorses the Corporate Carbon Neutrality Action Plan outlined in Section 3.*

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**Greg Campbell**  
Chief Executive

**Attachment 1:** Illustrative scenarios of future emissions pathways and costs for GWRC

**Attachment 2:** Discussion paper on the costs of inaction on climate change