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Submitted Report Exemplar

Level 3 Education for Sustainability

Achievement Standard 90831

Analyse the impact that policies have on a sustainable future

Merit

TOTAL	05
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ASSESSOR'S USE ONLY

THE IMPACT THAT POLICIES HAVE ON A SUSTAINABLE FUTURE

3.4 | EDUCATION FOR SUSTAINABILITY | LEVEL 3 | 2022



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Wellington Region Waste Minimisation and Management Plan (2011-2017)

INTRODUCTION:

The **Wellington Region Waste Minimisation Education Strategy (WMES)** aims to conserve natural resources and improve resource efficiency by helping households, community organisations and businesses to reduce, reuse and recycle as much as possible.¹ This waste management and minimisation strategy addresses the limited public knowledge on how to minimise and manage waste and the purpose of this plan is to help educate people about the benefits of adopting a waste minimization culture. This ensures that the Wellington region is doing its part towards its waste related social, economic, cultural and environmental responsibilities. The practices it aims to implement include development activities across the Wellington Region that minimise waste through educating the community about waste disposal and resource usage and involves targeted communications that will increase the efficiency of resources to reduce the overall quantity used. These activities will also aim to ensure community support for other actions in the Waste Management and Minimisation plan (WMMP). However these collaborative community development initiatives require cohesive and constructive engagement from the community and stakeholders in order to expand awareness of the impacts of waste disposal and create changed behaviour.

Key Targets:

- **To reduce the reliance on landfills**, reducing total volumes of waste disposed to landfills.
- **To maximise recovery** by increased volumes of waste diverted through reuse and recycling.
- **To increase the recovery of materials and/or energy from waste**, providing local economic development opportunities.
- **Informed community awareness** about the effects of waste and the opportunities they have to reduce waste and improve efficiency of resource use.
- **To clean streets and public areas** by reducing litter, illegal dumping and associated costs and therefore reduce the harmful effects of waste².

¹<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

²<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

POLICY DEVELOPMENT PROCESS/BACKGROUND:

Environmental:

Between the 1st of July 2009 to 30th of June 2010, 265,207 tonnes of waste was generated, collected, transported and dumped into Wellington region's landfills which equates to 549kg/year of waste sent to landfill for every person in the region³. This significant amount of waste contributed to the development of this policy to minimise the amount of waste being disposed of that is composed of recoverable resources that are reusable, recyclable and/or compostable. The current quantity and type of waste created by humans exceeds the environment's ability to assimilate it effectively and environmental degradation occurs which can lead to the collapse of the local life supporting ecosystems and creates a significant negative impact on the environment.⁴ Determining an approach that is most likely to achieve a behaviour change outcome will have the greatest positive impact on the environment which is what this policy is aiming to improve through education for the public on waste management.

Social/Political:

The New Zealand Waste Strategy (2010) has two goals to manage and minimise waste in New Zealand. **The first Goal is to reduce the harmful effects of waste** by assessing the risk of harm to the environment and human health from waste to identify and take action on those wastes of greatest concern. **The second Goal is to improve the efficiency of resource use** by improving the efficiency of resource use to reduce the impact on the environment and human health and capitalise on potential economic benefits.

The 2011-2017 Wellington Region waste minimisation and management plan has underpinning principles for the WMES that have been adapted from the Wellington Region WMMP in order to achieve these goals.

In order to achieve Goal 1:

The plan recognises Stewardship which acknowledges the responsibility that all members of society have in looking after the environment and for the impact made from products made, used and disposed of. The current generations have a responsibility to maintain the life sustaining capacity of the environment for present and future generations and lessen the adverse environmental effects⁵. The significant harm that waste can have on the health of both humans and the environment must be recognised and therefore to maximise safety while carrying out this plan the waste minimisations activities must focus on reducing the harmful effects of waste by using appropriate waste management and minimisation procedures.

³<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

⁴<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

⁵<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

In order to achieve Goal 2:

The Wellington councils must recognise their responsibility for promoting effective and efficient waste management and minimisation throughout the region. The 2011-2017 Wellington Region waste minimisation and management plan also works to minimise waste based on the principles and requirements of the Waste Minimisation Act 2008. To successfully improve the efficiency of waste management the Wellington councils must provide effective, efficient and cost effective waste management and minimisation services, such as availability to Kerbside recycling options, to residents within the region. Improved productivity through efficient resource use will result in less waste generated. This would require forms of promotion such as reduced packaging, improved recycling options, and re-use opportunities and community involvement and cooperation.

Economic:

Waste management and minimisation is economically efficient because the efficient use of resources in order to minimise waste would reduce the overall economic cost of waste. The cost of general waste disposal in landfills is \$245.50 per tonne compared to disposal of green (organic) waste which is \$80.50 per tonne⁶. This supports the Wellington waste management and minimisation plan because it promotes organised waste disposal in order to reduce the cost of disposing waste. The Wellington landfill also promotes reducing, reusing and recycling your waste whether it is by using the kerbside recycling service, composting your food and garden waste at home, donating items to local organisations, sorting your waste or using the drop off options available such as the onsite Tip Shop and Recycle Centre⁷. This centre is available to drop off various items for resale or recycling such as glass bottles and jars, paper and cardboard, plastic grocery packaging with the numbers 1, 2 and 5, aluminium cans and steel tins. While waste minimisation may require a higher economic cost in the short-term to achieve the optimal outcomes, the long term benefits are improved, greater cost up-front will result in lower ongoing operational costs and this reduces the overall cost of waste management.⁸

Cultural:

The Waste Minimisation Education Strategy acknowledges the world views of Tangata Whenua and recognises the wider community's collective responsibilities of kaitiakitanga (guardianship and protection) which involves reducing waste and preserving the environment and finite resources⁹. In order to achieve this the waste management practices need to be worked in close partnership with mana whenua to address these with a culturally respectful approach.

⁶ <https://wellington.govt.nz/rubbish-recycling-and-waste/southern-landfill-tip-shop-and-recycle-centre/landfill-charges>

⁷ <https://wellington.govt.nz/rubbish-recycling-and-waste/southern-landfill-tip-shop-and-recycle-centre/landfill-charges>

⁸ <https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

<https://environment.govt.nz/assets/Publications/Files/wmmp-guide.pdf>

⁹ <https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

DISCUSSION OF POLICY IMPLEMENTATION:

Practice 1:

The first practice is to reduce the reliance on landfills and clean streets and public areas.

In order to achieve this there must be a reduction in the total volumes of waste disposed to landfills. This policy requires local councils and government to work alongside business owners and the public to promote waste minimisation with the aim to reduce waste related costs for consumers and businesses. Encouraging less waste creation by working to reduce waste related costs will lead to a reduction in waste disposal because it provides an incentive for individuals to reduce their contribution to disposal in landfills. This could involve a social marketing approach towards increasing recycling and 'smart shopping' which requires reduced individual consumption and buying products with less packaging or producing products in less packaging. The reduction in waste related costs would decrease the negative economic impact and the reduction in excess waste also improves the impact on the environment. To effectively clean the streets and public areas in the Wellington region there must be a reduction in littering and illegal dumping. The practices in place involve investigating a regional approach to education on littering and promoting community led clean-ups and raising awareness on issues that need to be addressed regarding waste disposal. Mātauranga Māori is a body of knowledge that provides guidance to the way we manage natural resources effectively¹⁰. Kaitiakitanga is the term used for guardianship and protection of the land and its natural resources. Kaitiakitanga is part of the Mātauranga Māori philosophy, and in order to manage resources effectively we must all do our part to protect the land and its resources to reduce the waste entering the environment. This will bring people together over a shared goal and therefore improve social sustainability along with environmental sustainability.

Practice 2:

The second practice aims to maximise recovery of materials and/or energy from waste.

To maximise recovery of materials, the WMMP will provide local economic development opportunities in order to promote increased volumes of waste redirected to reuse and recycling. These include promotion of reuse and recycle centres around the region and providing infrastructure and services such as transfer stations, recycling bins and the Regional kerbside recycling service. Providing promotion of waste minimisation actions will encourage the community and businesses, especially targeting construction and demolition waste, to manage their own actions regarding waste management/minimisation through reducing, reusing and recycling. The aim is to promote projects that maximise recovery of materials and also positively impacts environmental sustainability such as the Community-driven project undertaken by Epuni School in the Hutt valley called the food garden project. The school decided to convert a disused sports field into a large garden that not only feeds the students of this low-decile school, but also feeds the community.¹¹ This type of project brings communities together to improve the environment and support each other which improves social and economic sustainability and displays manaakitanga,

¹⁰ <https://www.epa.govt.nz/community-involvement/science-corner/matauranga-maori/>

¹¹ <https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

the process of showing respect and generosity to others. By promoting recovery of materials and making it more attainable and less cost restrictive there is an increased chance of the community reducing, reusing and recycling materials when possible which will improve environmental sustainability. However this practice still relies on community involvement and behaviour change.

Practice 3:

The last practice is informed community awareness about the effects of waste and the opportunities they have to reduce waste and improve efficiency of resource use.

This involves promoting voluntary measures that encourage community behaviour change through a range of different approaches. To successfully promote these measures there has to be access to relevant information regarding waste management for everyone involved, which includes various ways to source and share the information. The communication measures about regional waste management education will involve consistent messaging from a single recognisable brand which will ensure communities and businesses are able to recognise and easily access relevant information¹². This practice will therefore develop regional toolkits and programmes, and provide regional resources for waste minimisation at events to promote awareness and behaviour change¹³. This practice is only effective however if there are agreed common goals in relation to waste management and a shared understanding of those goals and what needs to be achieved. These goals may be slightly different for each stakeholder involved as well, for example, the common goal may be to reduce organic waste to landfill, for shops this would be to cut down on waste disposal costs by reducing general rubbish and odour whereas for landowners who use processed waste (compost) may want material to help soil fertility on their property. It is important to target each individual stakeholder's interests to display the advantage in order to successfully create behaviour change. This practice would be successful if it creates behaviour change and educates the community on waste management. The Mātauranga Māori philosophy states that according to kaitiakitanga if we look after the land, the land will look after us. This practice can create a positive relationship with the land and its resources where both the individuals and the environment thrive. This improves social sustainability because it promotes the advantages of waste management and minimisation for individuals and aims to improve the overall social and environmental sustainability of the community.

¹²<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

¹³<https://archive.gw.govt.nz/assets/Our-Environment/Waste-and-recycling/WGNDocs-1304149-v1-WellingtonRegionWasteMinimisationEducationStrategy2013.pdf>

CONCLUSION:

The Wellington waste management team is in the process of providing new bins to Lower Hutt residents and started delivering the Hutt City Council rates-funded waste and recycling services on 1 July 2021¹⁴. This includes new general waste wheelie bins, mixed recycling wheelie bins, garden waste wheelie bins and glass recycling crates being delivered to around 40,000 houses in the Wellington region along with new all-electric trucks that will make the Hutt City Council collections¹⁵. This operation will successfully implement the goals, to clean streets and public areas and maximise recovery of materials, put in place by the The Wellington Region Waste Minimisation Education Strategy. It provides sufficient bins for disposing of waste and recycling materials, effectively separating materials which maximises the recovery of materials. This will reduce pollution and the amount of waste that is dispersed into the environment because there is a significant range of bins to dispose of materials and this avoids bins overflowing and polluting the environment. The provision of new bins reduces the pollution into the environment and maximises the recovery of materials which positively contributes to environmental sustainability and to the policy's objectives. The use of Electric trucks for collections further reduces any negative environmental impact from greenhouse gas emissions. This operation will also successfully implement the goals, to inform the community about the effects of waste and the opportunities they have to reduce waste and improve efficiency of resource use, put in place by the The Wellington Region Waste Minimisation Education Strategy. This action provides the community with sufficient waste disposal resources with a range of different options for disposing of materials and services to safely and effectively dispose of them. This also acts to promote awareness of the different materials present so the community better understands which need to be disposed of and which can be reused and recycled. These bins separate the different materials and make it easier for individuals to actively make a change to their waste management behaviour which improves the social sustainability of the community in relation to waste management.

¹⁴ <https://www.wastemanagement.co.nz/news-and-media/massive-bin-rollout-in-lower-hutt-successfully-underway/>

¹⁵ <https://www.wastemanagement.co.nz/news-and-media/massive-bin-rollout-in-lower-hutt-successfully-underway/>

CHRISTCHURCH – ŌTAUTAHĪ WASTE MANAGEMENT AND MINIMISATION PLAN (2020)

INTRODUCTION:

The Christchurch - Ōtautahi Waste Management and Minimisation Plan aims to create a sustainable city that is working towards zero waste and a circular economy by minimising waste and using resources sustainably. In order to achieve zero waste products must be responsibly made and used and all products should be made so that at the end of their initial use they have a value (can be reused, recycled or repurposed) to minimise social and environmental harm.¹⁶ Achieving this vision involves reducing our reliance on landfill, reducing the creation of products and purchasing of products that aren't needed, and increasing opportunities to reuse and recover materials that we already have.

Key Targets

- **Everyone has access to recycling, resource recovery and waste management services.**
- **Organisations and individuals understand that reducing and minimising waste is their responsibility, as well as ours.**
- **Valuable resources are reused or recycled and don't go to landfill.**

POLICY DEVELOPMENT PROCESS/BACKGROUND:

Environmental

In Christchurch 269,405 tonnes of waste was sent to the landfill in 2019 and 123,532 tonnes was diverted from landfill through the recycling and organics processes¹⁷. In 2013 Christchurch set a waste reduction target of no more than 80kg of waste sent to landfill per person each year by 2019 however in 2019 there was 115kg per person sent to landfill. The Christchurch - Ōtautahi Waste Management and Minimisation Plan aims to reduce this amount by recovering or reusing products and materials that still have value. A linear economy, where materials are used to create products with a limited lifespan that are then disposed of into landfills, is an inefficient use of resources¹⁸. This reduction in usage and waste disposal as a result of more efficient use of resources will reduce pollution and therefore reduce the damage caused by greenhouse gas emissions and discharge into the environment, positively impacting environmental sustainability.

Social/Political

The national direction for the Christchurch - Ōtautahi Waste Management and Minimisation Plan was set by the New Zealand Waste Minimisation Act 2008 (the Act) and the New Zealand Waste Strategy 2010. Under the Act, councils have a responsibility to 'promote effective and efficient waste management and minimisation'.¹⁹ This prompted the development of the 2020 waste minimisation plan which aims to meet the growing expectations of residents for waste minimisation, which involves improved resource recovery services and requires the councils to work alongside central government on waste minimisation initiatives. This addresses the lack of promotion and understanding of waste management within the community which will improve individuals ability to manage waste. Improving resource recovery services and adopting waste management initiatives will further support people in minimising waste where possible.

Economic

Currently the recycling systems in place rely on being able to sell most of their products overseas, however international policies have been put into place to ban or restrict the import of a number of different products, including low-quality plastics. Therefore the quality of materials must be prioritised over the cost in order to continue to recycle materials. This requires the council to raise the quality of what is collected, and how it is processed, in order to provide higher-quality recyclables for sale. While this change will increase the cost of recycling and decrease the amount of materials that can be recycled, it will improve the environmental and economic sustainability in the long-term because it prioritises the quality and therefore the durability of materials being recycled. There is also a need to find local solutions to manage our waste and resources sustainably such as onshore processing solutions²⁰.

¹⁷<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

¹⁸<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

¹⁹<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

²⁰<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

DISCUSSION OF POLICY IMPLEMENTATION:

Practice 1

Everyone has access to recycling, resource recovery and waste management services.

This practice involves funding opportunities for organisations that introduce resource recovery and waste minimisation services. This requires collaboration with these organisations and local representatives, as well as the community, to promote and improve current operations and develop and implement solutions. There are currently recycling and organics kerbside collection services and public drop-off facilities for recycling, organics and other items including hazardous substances and scrap metal, however to provide better access to these services for the community there would need to be an increase in the services available in Christchurch, especially rural areas, and increased promotion of current services and drop-off facilities. This ensures that waste, recycling and organics facilities support the policy's climate change targets. These targets are zero net greenhouse gas emissions, and to halve the 2016 baseline for methane, by 2045.²¹ The Mātauranga Māori philosophy supports Rangatiratanga which is a term that values demonstrating leadership and self-determination. This practice requires individuals to maximise their use of available resources and improve their current waste minimization practices and this is shown through demonstrating rangatiratanga, especially self-determination, in making a change to their current actions. This practice would be successful at improving the overall environmental sustainability within the community however it requires the majority of the community to improve their current actions regarding waste management and minimisation.

Practice 2

Organisations and individuals understand that reducing and minimising waste is their responsibility, as well as ours.

This practice requires collaboration with Papatipu Rūnanga, organisations, industry operators and the Central Government, to support a regional and national transition to zero waste and a circular economy.²² To promote reduction of waste in individual households and businesses there must be marketing and communication programmes in place that target the community, such as education and support programmes and events including Learning Through Action school programmes.²³ Mātauranga Māori is the body of knowledge that helps to provide guidance about managing resources. Ngātahitanga (Collaboration) is required in order to effectively manage resources. This practice involves working with groups and organisations on initiatives to minimise waste and recover resources to create a difference. This policy is only successful if this practice is put into place and creates behaviour change in individuals within the community. They must view a change to their waste management practices as an opportunity to improve their lifestyle therefore educating the community on the advantage of putting these practices in place will create an

²¹<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

²²<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

²³<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

incentive for the community to make a change. This change would bring the community together and therefore improve social sustainability because they would have a common goal that improves the surrounding environment.

Practice 3

Valuable resources are reused or recycled and don't go to landfill.

To make sure waste management facilities and services maximise resource recovery and avoid adverse effects to people and the environment, the quality of what is being collected, and how it is processed, must be improved. To reduce adverse effects of waste to people and the environment there must be procedures in place to ensure there are minimal contamination levels in products which can then be sorted and are suitable for processing or sale.²⁴ Ensuring the quality of materials that are recycled and reused will reduce costs in the long term for replacing damaged or dangerous materials. This will create long-term economic benefits and reduce the environmental impacts created from faulty or contaminated materials. Matauranga Māori provides knowledge on managing resources, and Te tatanga mātāpono (the proximity principle) looks at using local and national resource recovery solutions, where possible to reduce the reliance on international markets.²⁵ This ensures that Christchurch has a self-sustaining economy in relation to recycling and reusing waste products which improves the economic sustainability in Christchurch. It is important that, where possible, responsibility for waste management and minimisation procedures is shared to ensure the life-supporting functions of the environment are maintained and protected for future generations, working with Papatipu Rūnanga ensures that Kaitiakitanga (Guardianship and protection) is supported.

²⁴<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

²⁵<https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Waste-Management-and-Minimisation-Plan-2020.pdf>

CONCLUSION

The site of the Burwood Resource Recovery Park (BRRP) is being handed back to the Christchurch City Council, a decade after it was set up to process mixed waste materials following the 2011 Christchurch earthquake. Though the BRRP ceased receiving earthquake waste at the end of 2019, it continued processing and sorting waste and burying non-recyclable inert waste for a further year. With the waste buried or removed, landscaping commenced in 2021, preparing the site to be handed back to the CCC. The extensive landscaping plan has added walking, cycling and horse tracks through the forest park, improved beach access, and the native planting will support greater biodiversity and wildlife in the park.²⁶ The Christchurch - Ōtautahi Waste Management and Minimisation Plan aims to create a Circular economy which supports a sustainable future. The transition of the BRRP from a waste processing area back into a forest park shows the successful development of Christchurch's plan to manage waste. It converts a land area that was setup to process waste back towards a community area that supports greater biodiversity and wildlife conservation. This creates a positive environmental system that will continue to improve sustainability in the long-term. The conversion to a forest park also provides a communal space for the community to interact with each other and to stay active. It encourages restoration of regions that have been damaged by waste and it improves the relationship between individuals in the community through having a communal space to interact.

²⁶ <https://www.wastemanagement.co.nz/news-and-media/burwood-earthquake-waste-site-returned-to-city-as-parkland/>

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Merit Exemplar 2022

Subject	Education for Sustainability		Standard	90831	Total score	05
Q	Grade score	Annotation				
1	M5	<p>The candidate has provided sufficient evidence to meet M5 criteria. The response included a detailed explanation of how forces have shaped at least two policies within the context of sustainability. The response included two forces per policy, and the impact that the policies have on a sustainable future has been analysed in depth. Reference has been made to Māori concepts and values relating to the natural environment.</p> <p>A higher grade could have been gained with a more in-depth overall response and use of a wider range of reference sources.</p>				