Aorere ki uta Aorere ki tai - Tasman Environment Plan

Issues and Options Report

Energy and Infrastructure

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Lead author:	**Reuben Peterson**
Reviewed by:	**Susan Edwards**

Important Note

September 2021

The Office of the Minister for the Environment released the Exposure Draft Natural and Built Environments Act (NBA) on 29 June 2021 (the Exposure Draft). As set out in that Exposure Draft, Minister Parker proposes to replace effects under the RMA with positive **outcomes.**

The NBA and the proposed Strategic Planning Act (SPA), and Climate Change Adaptation Act (CAA) will influence the development of the TEP and how we are required to manage and plan for Tasman district's environment.

As of September 2021, this is what we know:

1. The purpose of the NBA is to enable: -
   (a) Te Oranga o te Taiao to be upheld, including by protecting and enhancing the natural environment; and
   (b) people and communities to use the environment in a way that supports the well-being of present generations without compromising the well-being of future generations.
2. Environmental limits the purpose of environmental limits is to protect either or both of the following: (a) the ecological integrity of the natural environment: (b) human health and must be prescribed for at least these matters: air; biodiversity, including habitats and ecosystems; coastal waters; estuaries; freshwater; and soil.
3. Sixteen draft outcomes are identified (these are provided in Appendix 1)

Te Oranga o te Taiao is to be central to the new legislation, reflecting a Te Ao Māori approach. It also encapsulates the intergenerational importance of the health and well-being of the natural environment.

In this report the author will, where necessary and appropriate, address the issues and options from the perspective of the new NBA purpose and outcomes.

Acronyms

CDEM	Civil Defence Emergency Management
CMA	Coastal Marine Area
EECA	Energy Efficiency and Conservation Authority
FDS	Future Development Strategy
GHG	Greenhouse Gas
LGA	Local Government Act 2002
NES	National Environmental Standards
NES-ET	National Environmental Standards for Electricity Transmission Activities 2010
NES-FW	National Environmental Standards for Freshwater 2020
NES-SDW	National Environmental Standards for Sources of Drinking Water 2008
NES-TF	National Environmental Standards for Telecommunication Facilities 2017
NPS	National Policy Statement
NPS-ET	National Policy Statement for Electricity Transmission 2008
NPS-FM	National Policy Statement for Freshwater Management 2020
NPS-REG	National Policy Statement for Renewable Electricity Generation 2011
NPS-UD	National Policy Statement for Urban Development 2020
NTLDM	Nelson Tasman Land Development Manual 2020
NZCPS	New Zealand Coastal Policy Statement 2010
NZECP	New Zealand Electrical Code of Practice 34:2001
NZEECS	New Zealand Energy Efficiency and Conservation Strategy 2017-2022
NZS	New Zealand Standards
RMA	Resource Management Act 1991
RPTP	Regional Public Transport Plan
TDC	Tasman District Council
TEP	Tasman Environment Plan
TRMP	Tasman Resource Management Plan
TRPS / RPS	Tasman Regional Policy Statement

Table 1: Acronyms used in this report

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1. Executive Summary

1.1 Introduction

Energy use and generation, and infrastructure are both vital to the Tasman region. They enable us to move around, work, play and live successful, healthy lives. While both matters have significant benefits, they can also have significant adverse effects. This can be to the environment, and to people's social, economic, and cultural well-being including their health and safety. The role that both items play in responding to climate change, urban growth, and the need for resilience are also important factors to respond to. In many cases both energy and infrastructure are of regional or national significance.

1.2 Purpose and Scope

The purpose of this report is to outline specific issues around Energy and Infrastructure, investigate potential options and define the recommended option(s) to address the issues. The feedback and direction received on the recommended option(s) will inform development of the Draft Aorere ki uta Aorere ki tai - Tasman Environment Plan (TEP).

Any draft recommended option(s) defined in this report will be tested with iwi, council, and community and are likely to evolve during the plan development process.

1.3 Issue(s)

Tasman District Council (Council) has provisions in place which manage aspects of both Energy and Infrastructure. However, these are not comprehensive, leaving aspects of both topics without clear policy direction or rule support. This means additional or new provisions are required to respond to the following identified issues:

Energy	**Issue 1:** The need to recognise and provide for the benefits of renewable energy generation.
	Issue 2: Adverse effects of renewable energy generation activities.
	Issue 3: Operational and functional needs of renewable energy generation activities, including protection from reverse sensitivity effects.

Infrastructure	**Issue 1:** The need to recognise and provide for the benefits of infrastructure in enabling social, economic, environmental, and cultural well-being.
	Issue 2: The establishment, ongoing use, and maintenance of infrastructure can have adverse effects on the environment.
	Issue 3: Adverse effects on the environment from infrastructure can be less acceptable in areas or sites with identified significant values.
	Issue 4: Operational and functional needs of infrastructure activities, including protection from reverse sensitivity effects.
	Issue 5: Coordination of existing development and planned growth, including the need to accommodate growth.
	Issue 6: Infrastructure needs to be resilient to natural hazards and climate change effects.

Table 2: Energy and Infrastructure issues

1.4 Outcome(s) Sought

The desired outcomes for Energy and Infrastructure within the Tasman region can be generalised into the following broad outcomes:

1) Renewable energy generation and infrastructure activities are encouraged and enabled so that the various benefits can be achieved, including responding to climate change.
2) The adverse effects of energy and infrastructure activities are managed, with a particular focus on areas of identified significant value.
3) Operational and functional needs of energy and infrastructure activities are provided for, and reverse sensitivity effects are managed.
4) Infrastructure and urban growth planning are coordinated and efficient.
5) Infrastructure is resilient to natural hazard and climate change effects.

1.5 Option(s)

The two options that have been explored are (1) retaining the status quo; and (2), providing two strengthened and specific sets of provisions, one for energy matters and one for infrastructure matters. This would involve objectives and policies through to rules providing provisions which achieve the desired outcomes above. The rules would feature the following general approach:

1) Allow a variety of energy and infrastructure items, including their operation, maintenance and upgrading as permitted activities (within limits)
2) Work with requirements of applicable National Environmental Standards (NESs), without duplicating them unnecessarily
3) Differentiate between large and small-scale activities
4) Specifically manage effects in areas of identified significant values
5) Manage effects and responses in hazards areas
6) Feature climate change responses, including restricting non-renewable energy generation
7) Consider separate infrastructure provisions relating to three-water infrastructure

1.6 How Issues relate to Iwi Interests and Values

Iwi interests are a key component of both Energy and Infrastructure. This is particularly relevant around wastewater infrastructure and other infrastructure being located near sensitive and important areas such as rivers, the coast, and culturally important sites. Responding to climate change is also an important element to iwi. This is in terms of increasing the amount of renewable energy being developed and used, and in ensuring infrastructure is resilient to the impacts of climate change. Infrastructure, such as piped networks, have the potential to enable the transfer of water from one catchment to another which is of concern to iwi. This matter is more directly addressed through the freshwater chapter. Iwi are also interested in the benefits of energy and infrastructure and being involved in achieving these energy and infrastructure outcomes, including through their own involvement in energy generation.

1.7 Summary of Analysis

There are many Government policy documents, strategies, plans and pieces of legislation that relate to the Energy and Infrastructure topic. This includes National Policy Statements (NPSs) and NESs that require Council to respond with regulatory actions. These documents have been reviewed and summarised within this report. The documents have a common theme of:

1) Responding to climate change (reducing emissions)
2) Creating resilient infrastructure
3) Adapting to upcoming changes (climate, economic, social)
4) Supporting renewable energy generation and efficient use of energy
5) Achieving coordinated infrastructure and urban growth planning.

Council's own documents follow a similar theme. Iwi managements plans and strategies also set out much of this same thinking. The efficiency and effectiveness reviews of the existing Tasman Regional Policy Statement (TRPS) and Tasman Resource Management Plan (TRMP) have shown that, while some of the relevant aspects for these topics are currently addressed, there are many areas that need to be updated, and gaps that need to be filled.

Reports by the Civil Defence Emergency Management (CDEM) Group and by Council have shown that there are critical lifeline utilities that are at risk of natural hazard events and climate change effects. Renewable energy assessments for both Tasman and Nelson districts have shown that there are renewable energy sources available in the region.

Early consultation with the community has shown that meeting Government requirements, reducing emissions, responding to climate change, renewable energy generation and use, building resiliency and security, and manging urban growth are all important. Consultation with a specific Energy and Infrastructure Group, which has been set up for this project, has also highlighted many of these same items. This group also raised affordability, future resources, and environmental pressures as key matters.

1.8 Recommendations

To address the issues, a broad option of providing a strengthened and specific set of provisions for both Energy and Infrastructure is recommended. This will involve addressing many specific components of both topics. Taking this approach of specifically addressing the topics enables a cohesive set of provisions to give strength and direction to future decisions around both Energy and Infrastructure. It will also achieve the expectations and requirements of the relevant Government documents and community, iwi and industry expectations. It is also in keeping with the requirements of the National Planning Standards and can achieve the outcomes of the draft Natural and Built Environments Act.

This recommendation, and the options presented, will need substantial further development. It is anticipated that this will occur through a series of workshops on individual components of both topics.

2. Principles Underpinning the Development of the TEP

2.1 Guiding Principles

The Council will use guiding principles in the development of the Aorere ki uta, Aorere ki tai – Tasman Environment Plan (TEP). These principles are the philosophy and values that will underlie the approach and content of the TEP, but will not in themselves have specific objectives, policies or methods. The anticipated outcomes of the TEP should achieve these principles.

The principles for developing the Aorere ki uta, Aorere ki tai – Tasman Environment Plan are:

1. To recognise the interconnectedness of the environment and people, ki uta ki tai / mountains to the sea.
2. To enable healthy and resilient communities by achieving healthy and resilient environments (Te Oranga o te Taiao).
3. To work in partnership with iwi.
4. To meet the present and future needs of our communities and iwi.
5. To enable community development within environmental limits.
6. To support and enable the restoration of at-risk environments.
7. To recognise and provide for the wellbeing of individuals, where this is not at the expense of the public good.
8. To take a precautionary or responsive management approach, dependent on the nature and extent of the risk, and where there is uncertainty or a lack of information.
9. To ensure the TEP provides strategic leadership for Council's key planning documents.

These principles will be implemented through evaluation of options in this report and in future Section 32 assessment, drafting and decisions.

2.2 Te Oranga o te Taiao

The exposure draft for Natural and Built Environments Act requires Te Oranga o te Taiao to be upheld and is described as follows:

Te Oranga o te Taiao incorporates—

a) the health of the natural environment; and

b) the intrinsic relationship between iwi and hapū and te Taiao; and

c) the interconnectedness of all parts of the natural environment; and

d) the essential relationship between the health of the natural environment and its capacity to sustain all life.

The TEP process and document provides a key mechanism to achieve our desired outcomes for our relationship with te Taiao (the natural world), including the community outcomes defined in the Long Term Plan[1], and the vision of the Te Tauihu Intergenerational Strategy (Wakatū, 2020):

[1] *The outcomes are available in the Long Term Plan 2021- 2031 on the Council's website*

"We are the people of Te Tauihu. Together, we care for the health and wellbeing of our people and our places. We will leave our taonga in a better state than when it was placed in our care, for our children and the generations to come."

The use of Te Oranga o te Taiao in this report utilises a similar approach and hierarchy to that defined for Te Mana o te Wai in the National Policy Statement for Freshwater Management 2020 (MfE,2020. NPS-FM), and extends this fundamental concept to other domains: Te Tai (sea), Te Āngi (air) and Te Whenua (land).

The objective of this approach is to ensure that natural and physical resources are managed in a way that prioritises:

(a) first, the health and well-being of the natural environment and ecosystems;

(b) second, the health needs of people;

(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

The Energy and Infrastructure portfolio encompasses a wide range of activities, locations, and purposes. The issues raised in this report all have a relationship with the principals of Te Oranga o te Taiao to varying degrees. In particular, the placement of the infrastructure or energy generation can impact on the health, interconnectedness, and life sustaining capacity of the natural environment. Te Tau Ihu iwi through management plans and the Te Tauihu Intergenerational Strategy 2020 have identified an interest in these matters. The concept of Te Oranga o te Taiao has therefore played an important role in developing the issues and opportunities in this report.

3. Background Context

This paper covers both Energy and Infrastructure. Each matter is discussed separately or conjointly as appropriate under the headings below. These topics are contained in a single chapter in the National Planning Standards and are therefore addressed concurrently within this report.

3.1 Infrastructure

The efficient and effective provision of infrastructure is highly important to the functioning of the Tasman District and the wider region. It enables people and communities to carry out activities which meet their social, economic, and cultural needs. This has considerable benefits at all scales and infrastructure in its many forms is an essential part of a successfully functioning urban and rural environment. Infrastructure can also assist with achieving improved environmental outcomes such as through effective treatment and management of wastewater, or through the provision of renewable energy infrastructure.

3.1.1 Scope of the Infrastructure Topic

This aspect of the portfolio considers the District's Strategic Infrastructure and Network Utilities, including infrastructure that serves a regional and national function.

Strategic infrastructure in this topic includes national high-voltage and other electricity transmission lines and facilities, renewable energy generation infrastructure, regional waste and recycling facilities, community dams and hydro-electricity facilities, telecommunication and radiocommunication facilities, roads, cycle networks (such as Tasman's Great Taste Trail), and water and wastewater reticulation. Local network utility infrastructure, navigational aids, hazard warning devices, and meteorological services are also included in this portfolio.

Both the benefits and adverse effects of providing for the broadly identified infrastructure are also a key part of the scope.

Items excluded from this topic include:

- Aerodromes and ports which are managed separately through the proposed Special Purpose Zones.
- Privately owned and managed infrastructure such as that on individual industrial, farm or forestry sites.
- Parks, reserves, health and community infrastructure.
- Infrastructure standards and requirements set out in the Nelson Tasman Land Development Manual 2020 (NTLDM).
- Items directly covered by other legislation such as state highway matters which are covered under the Government Roading Powers Act 1989.
- Aspects directly managed by National Environmental Standards.
- Quality and quantity aspects of discharges from piped networks.

3.1.2 Scope of the Energy Topic

The Energy aspect of the portfolio considers energy use and generation within the Tasman District. These matters also have relevance at a regional level across Te Tauihu and nationally.

Within the scope of the Energy component of this portfolio are:

- Renewable electricity generation

- Other renewable energy sources (such as ethanol from biomass)
- Efficient use of energy (transportation infrastructure, urban growth areas, process heat[2])
- Positive benefits of carbon reduction in responding to climate change
- Security of supply and resiliency of related infrastructure
- Benefits and adverse effects of energy generation and use.

3.1.3 Topic Considerations - Infrastructure

While infrastructure is necessary and beneficial, it can also have adverse effects relating to its positioning, construction, operation, maintenance, and potential upgrading over time. Above ground infrastructure, in particular can have adverse impacts on visual amenity, areas of cultural significance, natural and landscape areas of significance, and other uses within zones. Above ground infrastructure can include elements such as buildings, structures, pylons, poles, overhead wires, supporting structures, pipes, panels, and antennas. Other infrastructure, in particular underground infrastructure, may have limited impacts. In all cases the infrastructure should be sensitively designed and appropriately located to realise its benefits while managing the impacts.

The operation and maintenance of infrastructure can also be impacted by other land uses that may seek to establish nearby. An example applicable to the Tasman District would be 'reverse sensitivity' effects from residential development occurring close to a state highway or transmission line. The level of amenity expected by the residential use is not likely to be achievable if built too close or if mitigation is not in place. Other limitations may be around physical access to infrastructure for maintenance, operation or upgrading purposes. A further impact is of potential disturbance through activities such as earthworks near to the infrastructure, or activities such as buildings or trees that may locate too close to infrastructure to enable their efficient operation.

The resilience of infrastructure is also important in terms of climate change and natural hazards. Sea level rise, drier and wetter periods, increased intensity of storm events, warmer temperatures, along with natural hazards such as landslides, earthquakes or fires all have an influence on infrastructure. Infrastructure is often a regionally, or in some cases nationally, significant matter.

3.1.4 Topic Considerations – Energy

Energy use is a fundamental part of our society and is required for almost everything we do. This includes housing, employment, transport, primary production, industry, and food and goods production. This supports people's wellbeing, health and safety, and the Tasman economy. Energy is a regionally and nationally significant matter.

Typically, the energy we use is electrical energy. Therefore, renewable electricity generation is a key component, and this is driven by the National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG). Also, of direct relevance to Energy generation and use, are Central Government legislation, strategies and plans which direct action in relation to climate change, adaptation, and resilience. These matters are also integral to many Council documents.

Renewable electricity generation can occur at a variety of scales from small or micro generation for home use, through to large scale commercial generation. Generation can be from solar, wind, hydro,

[2] *Process heat is defined by the International Energy Agency as 'primarily used for warming spaces and industrial process'. This is often in the form of steam, hot water, or hot gases. Examples include heat to process wood into pulp and paper, or for heating large offices.*

biomass, or potentially from wave / tidal energy. These renewable energy resources are available, or have potential availability, within the region at varying scales and locations.

Energy use is also within the scope of the Energy portfolio. Efficient energy use can be driven by suitable transport infrastructure, planning for areas of urban growth, and through energy efficient design of urban areas. It is envisaged that actions to promote and achieve energy efficiency will come through an integrated approach to this portfolio and others within the TEP project (such as the Transport, Urban and Rural chapters). As part of Climate Change portfolio, the philosophy of energy efficiency will be considered throughout the TEP project.

Energy resiliency and energy security are within the scope of this portfolio. Energy security is inherent in enabling renewable energy generation in the region, while energy resiliency, particularly for the associated infrastructure, will be achieved in the infrastructure component of this portfolio.

Finally, energy is not necessarily restricted to renewable electricity generation. It can also include management of process heat from industrial or large-scale applications, and energy from other sources such as landfill gases or ethanol from forestry by-products.

3.1.5 Information Sources – Energy and Infrastructure

The information sources and consultation used to date to understand the issues and options for the infrastructure portfolio are set out below. It is important to note that further consultation and information gathering will be required to further develop responses to these issues.

There are a wide range of statutory documents that are relevant to the provision of infrastructure, including NPSs on Urban Development; Freshwater Management; Electricity Transmission and Renewable Electricity Generation, and the New Zealand Coastal Policy Statement. There are also relevant NESs on Freshwater, Telecommunication Facilities; Electricity Transmission and Drinking Water. Other legislation and standards are also relevant, including transport and climate response related acts. Tasman District Council (TDC / Council) has a wide range of plans and strategies which are also of direct relevance to both the Energy and Infrastructure portfolio. Appendix 2 contains a summary of the elements of these statutory documents that relate to this portfolio.

The strategies, plans, documents, and consultation outcomes set out below are those that have a direct bearing on determining the issues relevant to this portfolio. Each section outlined below is followed by a summary box due to the extent of material provided.

National Strategies and Plans

There are a wide range of national strategies and plans which have a direct or indirect relationship with the Infrastructure and Energy portfolio. Some of these have been recently released and are summarised below.

The New Zealand Infrastructure Commission has recently released the New Zealand Infrastructure Strategy 2022 – 2052[3] (the Infrastructure Strategy). While this has a broader scope than the infrastructure portfolio within the Aorere ki uta, Aorere ki tai – Tasman Environment Plan it has many relevant objectives. The five objectives of the Infrastructure Strategy are listed below. These

[3] *New Zealand Infrastructure Commission Te Waihanga, Rautaki Hanganga o Aotearoa New Zealand Infrastructure Strategy 2022 – 2052, New Zealand Government*

are set out as items that need to be completed as a nation to achieve the vision of a thriving New Zealand:

1) **Enabling a net-zero carbon emissions Aotearoa** through rapid development of clean energy and reducing carbon emissions from infrastructure.
2) **Supporting towns and regions to flourish** through better physical and digital connectivity and freight and supply chains.
3) **Building attractive and inclusive cities** that respond to population growth, unaffordable housing and traffic congestion through better long-term planning, pricing and good public transport.
4) **Strengthening resilience to shocks and stresses** by taking a coordinated and planned approach to risks based on good-quality information.
5) **Moving to a circular economy** by setting a national direction for waste, managing pressure on landfills and waste-recovery infrastructure and developing a framework for the operation of waste-to-energy infrastructure.

Aotearoa New Zealand's Emissions Reduction Plan 2022[4] has been produced by the New Zealand Government as the next step in putting the country on a path towards a low-emissions economy and contributing to global efforts to limit temperature rise to 1.5ºC above pre-industrial levels. The management of energy and infrastructure play a key role in achieving this. The Plan makes reference to the following:

- Improve electric vehicle charging infrastructure
- Improve public and active transport facilities and options
- Further infrastructure investment to support improved urban environments
- Fund renewable energy generation, and the bioenergy market
- Support businesses to improve energy efficiency and switch from fossil fuels to low-emission alternatives
- Phase out coal boilers and ban new ones
- Invest in waste infrastructure (composting and resource recovery facilities)
- Prioritise nature-based solution to provide protection from flooding and rising sea-levels
- Ensure that Māori and government to work together on climate change actions
- Support the wider community to achieve an equitable transition
- Government to led by example

The Te mahere urutaunga ā-motu (tuhinga hukihuki) Draft National Adaptation Plan April 2022[5] is the country's first national adaption plan to build a foundation for action so that all sectors and communities are able to live and thrive in a changing climate. It is about resilience and adaptation and includes sections relevant to Energy and Infrastructure. The plan makes reference to the following:

- Improve energy efficiency in homes and buildings
- Develop climate change impact assessment guidance for infrastructure to support adaptation of transport and energy networks
- Identify the need for resilient infrastructure (includes social infrastructure and cultural infrastructure for Māori)

[4] *Te hau marohi ki anamata – Towards a productive, sustainable and inclusive economy – Aotearoa New Zealand's first Emission Reduction Plan May 2022*

[5] *Ministry for the Environment. 2022. Draft National Adaptation Plan.*

- Achieve infrastructure that is resilient to a changing climate, so that it protects or enhances the wellbeing of all New Zealanders.

Key Infrastructure Objectives are:

- Reduce the vulnerability of assets exposed to climate change
- Ensure all new infrastructure is fit for a changing climate
- Use renewal programmes to improve adaptive capacity

Many future work programmes are also identified including:

- Develop a methodology to assess impacts of climate change on physical assets and the services they provide
- Develop a resilience standard for infrastructure
- Build adaptation into Treasury decisions on infrastructure
- Develop the Waka Kotahi NZ Transport Agency (Waka Kotahi) Climate Change Adaptation Action Plan
- Evaluate climate related risks to landfills
- Invest in public transport and active transport
- Invest in infrastructure in urban areas
- Integrate climate adaptation and mitigation in new and revised standards
- Develop a National Energy Strategy

The draft Plan also identifies the interconnected nature of decisions and actions on many government work areas. This equally applies to the decisions and actions of Council.

The New Zealand Energy Efficiency and Conservation Strategy 2017 – 2022 (NZEECS)[6] sets the overarching policy direction for government support and intervention in promoting energy efficiency, energy conservation and the use of renewable sources of energy.

Its goal is for New Zealand to have an energy-productive and low-emissions economy. The target is for 90 percent of electricity to be generated from renewable sources by 2025.

The current NZEECS:

- Outlines government policies, objectives and targets for 2017-2022
- Guides the work programme of the Energy Efficiency and Conservation Authority (EECA)
- Encourages businesses, individuals, households, community institutions and public sector agencies to take actions to help unlock our renewable energy and energy efficiency potential, to the benefit of all New Zealanders

Its priority areas are:

- Renewable and efficient use of process heat
- Efficient and low-emissions transport
- Innovative and efficient use of electricity

This strategy is due to expire in mid-2022 and will be replaced by a new strategy to better align with the Government's climate change and energy system priorities. It is intended that the new NZEECS will complement, and integrate with, the broader Government-led national energy strategy.

[6] *Unlocking our energy productivity and renewable potential. New Zealand Energy Efficiency and Conservation Strategy 2017 – 2022. Ministry of Business, Innovation and Employment.*

The Aotearoa New Zealand Energy Strategy 2011 – 2021[7] was New Zealand's energy strategy for 2011 – 2021 period and had a goal for New Zealand to utilise its abundant energy potential for the benefit of all New Zealanders. This was to be achieved through environmentally responsible development and efficient use of the country's diverse energy resources to grow the economy through secure and competitively priced energy and to increase energy exports.

The Government is currently developing a new Aotearoa New Zealand Energy Strategy to support the transition to a low carbon economy, address strategic challenges in the energy sector, and signal pathways away from fossil fuels. The Energy Strategy will help set the pathways to navigate our way through the energy transition and to provide certainty for the sector, industry, and consumers. It is due to be developed by the end of 2024 and is being led by the Ministry of Business, Innovation and Employment.

Summary: Recent Central Government strategies and plans have placed a strong focus on responding to climate change through zero carbon targets, phasing out fossil fuels and moving to clean renewable energy sources, a focus of electrification, recognition of cultural requirements and working with iwi, reducing vulnerability and increasing resilience of infrastructure (including energy infrastructure) to natural hazards and climate change driven events, and improving the wellbeing of all New Zealanders.

Iwi Management Plans and Intergenerational Strategy

Council has received a number of Iwi Management Plans, two of which have specific sections relating to Energy and Infrastructure. In addition, to these is the Te Tauihu Intergenerational Strategy 2020[8] (the Intergenerational Strategy) which was developed as a guiding and forward-looking document to start the design of the future that the people of Te Tauihu want. This strategy was developed in partnership with Councils, iwi and various agencies in Te Tauihu, plus Central Government.

The relevant plans and strategies set out the following:

- Ngāti Rārua Environmental Strategy 2021[9]
    - Opposes wastewater treatment plants being located in cultural significant areas or in flood or inundation prone areas
    - Sets direction to require relocation of existing infrastructure where it affects the mana, mauri and wairua of ngā wāhi taonga tuku iho.

- Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan 2018[10]
    - Energy generation
        - Sets direction to protect landform and heritage landscapes, retain access to important cultural sites, focus on alternative sustainable energy generation and use, recognise and provide for Ngāti Tama's right to develop energy.

[7] *New Zealand Energy Strategy 2011 – 2021, Ministry of Economic Development, New Zealand Government*
[8] *Te Tauihu Intergenerational Strategy, Tupuna Pono Being Good Ancestors, 24 Nov 2020*
[9] *Poipoia Te Ao Turioa, Ngāti Rārua Environmental Strategy Nov 2021, Te Runanga o Ngāti Rārua*
[10] *Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan 2018*

        - Identifies issues of energy's contribution to emissions and climate change, impact on cultural values, unsustainable use of fossil fuels, loss of indigenous vegetation, ecosystems, landscape and cultural heritage sites, and the impact of damming and diverting waterways.
    - Infrastructure
        - Sets direction to avoid infrastructure near significant natural areas and landscapes
        - Outlines Ngāti Tama's desire to participate in decision making to protect cultural values in the management of wastewater, advocate for wastewater infrastructure to be located away from waterways and coastal environment if it poses a threat
        - Identifies growth pressures on infrastructure

- Ngati Koata Trust Iwi Management Plan 2002[11]
    - Avoid foreshore structures in areas of cultural use where there is the potential for adverse effect on cultural values.
    - Ensure that any long-term adverse effects on landscape from land disturbance and earthworks are avoided, remediated or mitigated.

- Te Tauihu Intergenerational Strategy 2020
    - Infrastructure is one of eight Intergenerational Wellbeing Outcomes. It includes the following statements:
        - We must design and deliver transport, water, and waste systems that service our needs, without damaging the environment, and to actively protect our region from natural events.
        - Our people have resilient transport, communications and energy networks, and water and waste systems.
        - When designing or updating infrastructure, we need to factor in reduced emissions, security of lifeline infrastructure (resilience), sustainability and circular use of materials.

The Strategy highlights the interconnectedness of this Infrastructure outcome with many of the other seven outcomes such as te Taiao – The Natural World and Rangatiratanga – Leadership. The role of infrastructure in regional resilience is also highlighted.

Summary: The iwi management plans and strategies identify the need to avoid infrastructure near significant natural areas and landscapes and to avoid other areas of sensitivity or risk. Also, to recognise cultural values, respond to climate change, focus on sustainable energy generation and use, reduce fossil fuel use and improve resilience of transport, communications and energy networks, and water and wastewater systems. In addition to this, to recognise and provide the ability for iwi to develop energy and participate in the decision-making process.

[11] *Ngati Koata No Rangitoto Ki Te Tonga Trust Iwi Management Plan June 2002*

Section 35 Report – Chapter 15 Strategic Infrastructure and Network Utilities[12]

The Tasman Resource Management Plan (TRMP) includes Chapter 15 Strategic Infrastructure and Network Utilities. The chapter states '*The network utilities and strategic infrastructure within Tasman are physical resources of considerable importance. They support human settlements and enable people and communities to meet their social, economic, environmental and cultural needs. Some network utilities are of national as well as regional importance.*' Also '*The ongoing provision for, and protection of network utilities and strategic infrastructure is vital for the social, economic and environmental benefits that accrue national, regionally and locally.'*

In 2019 Council undertook an efficiency and effectiveness review of this chapter in terms of s35 of the Resource Management Act 1991 (RMA). A one-page summary of this review and a table containing the recommended changes and additions from the section 35 report is attached as Appendix 3.

In general, the review found:

- The chapter relates to the Waimea Community Dam, and more recently, the efficient, effective and integrated provision of network infrastructure. The latter includes electricity, water, communications, wastewater, lighting, meteorological information and includes roads and airports.
- There is a lack of provision and protection of some strategic infrastructure and there is little support for continual operation or protection in relation to adjacent activity or reverse sensitivity effects.
- Since the TRMP was notified, significant legislative changes have occurred which impact on infrastructure provision and planning.

The recommendations set out in the summary are:

1. Retain objectives and policies relating to the Waimea Community Dam and Network Infrastructure as they remain relevant.
2. Strengthen the provisions around reverse sensitivity.
3. Extend the scope to clearly include objectives and policies for other regionally significant infrastructure, e.g., for airports, ports, regional landfills, the National Grid transmission lines etc.
4. Align and update the Tasman Regional Policy Statement (TRPS) objectives for Urban Water Network.
5. Implement the relevant objectives of the NPSs on Electricity Transmission, Infrastructure, Renewable Energy and Water.
6. Avoid duplication with Infrastructure related NESs.
7. Provide greater recognition of the importance of strategic infrastructure in relation to planning for climate change and natural hazard resilience.

[12] *Tasman Resource Management Plan, Efficiency and Effectiveness Evaluation – Chapter 15 Strategic Infrastructure and Network Utilities, 29 Nov 2019*

8. Ensure that policies provide protections for existing strategic infrastructure, not just new infrastructure.

While not specifically covered in the s35 report the TRMP also contains infrastructure provisions in Chapter 6 (Section 6.3 Urban Infrastructure Services). This provides a policy framework for utilities and services related to urban development and population growth. Specific policy is provided for Marahau, deferred zoned land, the Special Domestic Wastewater Disposal Areas, and the Takaka-Eastern Golden Bay Area.

Note that the s35 report for Urban Environmental Effects found that the fast growth and change in many parts of the district is pressuring the Council's capacity to roll out serviced land. The desire for a better co-ordinated infrastructure roll-out is also identified.

Also note that the TRMP has no specific section on Energy and as such no specific s35 report has been prepared for that topic. This s35 report does note that small scale renewable energy generation is largely a permitted activity provided setback and height limits are met, and that staff identify gaps for larger scale generation and a lack of alignment between RPS and TRMP objectives and policies. Energy is referenced in the Tasman Regional Policy Statement – see the s35 report summary below for details.

Summary: Council's review of Chapter 15 of the TRMP shows the need to retain existing provisions and strengthen these around reverse sensitivity and other strategic infrastructure, implement recent Government direction, consider strategic infrastructure when planning for resiliency and climate change, and protect existing and new infrastructure.

Section 35 Report – Efficiency and Effectiveness Review: Significant Resource Management Issues[13]

The efficiency and effectiveness review included a review of the significant resource management issues identified in the Tasman Regional Policy Statement (TRPS). This process has considered if the issues identified still meet the criteria for regional significance through a scoring process. The report also identifies new issues that are not currently included but should be, and makes recommendations in relation to retaining, removing, or reviewing the issues. These recommendations include actions that should be taken.

The tables below identify the regional issues of direct relevance to the Energy and Infrastructure portfolio and set out the recommendations made in the review report. Other regional issues have lesser degrees of relevance and have not been separately identified here.

Energy
TRPS Issue Statement
12.1 Environmental effects of energy resource development 12.2 Promotion of efficient energy uses
Assessment Summary
• Energy is required for the district to function • RMA Section 7 and National Policy Statements / Environmental Standards are relevant • Energy generation can result in significant positive and negative adverse effects, and conflicts in resource use.

[13] *Tasman Regional Policy Statement, Efficiency and Effectiveness Evaluation, FINAL Report Stage 2 of the Efficiency and Effectiveness Review: Significant Resource Management Issues, Tasman District Council 19 March 2021.*

• Efficient energy use can lower Greenhouse Gas (GHG) emissions and increase energy security. • Government direction around renewable energy and energy efficiency • Iwi Management Plans identify the need for alternative energy generation as a significant issue, including the effects on climate change and cultural values.
Recommendation
Retain these issues in the TRPS, update them in relation to national directives Add a new related issue to incorporate energy's relationship to climate change and promoting renewable energy generation.

Urban Growth and Infrastructure (proposed new issue)
Proposed new TRPS Issue Statement
Providing for urban growth and the infrastructure required to support it while avoiding or minimising adverse effects on the environment.
Assessment Summary
• The Tasman District is experiencing urban growth with an increase from 47,400 people in 2010 to 56,400 people in 2020 (17.5%). A further population increase of 7,700 residents is expected between 2021 and 2031[14]. • Urban growth can place additional pressure on existing infrastructure. • There is a high public and private costs associated with undertaking urban development and providing for and maintaining infrastructure. • The Future Development Strategy (FDS) 2019 is referenced in the s35 report including the need to have efficient integration of land use and necessary infrastructure.
Recommendation
Add a new issue: Addressing the need to provide for urban growth and infrastructure that meets the social, cultural and economic needs of a diverse population, while at the same time ensuring that important environmental and cultural values are protected.

Cross Boundary Effects
TRPS Issue Statement
13.2 (vii) Management of cross boundary issues between local authority boundaries.
Assessment Summary
• Integrated and consistent approaches to issues that cross local authority boundaries can help prevent conflicts arising, as well as enhance outcomes and promote efficiencies, e.g., through strategic planning for future urban development capacity, services (e.g., transport), and infrastructure.
Recommendation
Retain and update the existing issue: As population increases and land uses intensify, careful management of these issues remains significant. These issues could be combined and amended to better reflect current context and scope.

Urban Design and Development
TRPS Issue Statement
5.7 Maintenance and enhancement of the quality of the urban environment
Assessment Summary
• Under / poor capacity of storm and wastewater services of significant concern to Iwi (e.g., discharges of raw sewage to water bodies)

[14] *Growth model | Tasman District Council*

- Poor quality urban environment likely to have 'significant' adverse effects on quality of natural environment (discharges from poor network servicing poor health, social, cultural and economic outcomes.
- Issues related to poor quality urban environments (contamination of drinking water supply) cause widespread public concern.

Recommendation

Retain an update existing issue and add new related issues:
Add New Issue: Addressing urban growth and infrastructure
Add New Issue: Incorporate consideration of how urban design and development can contribute to mitigating and/or adapting to climate change effects (e.g., building design, active transport infrastructure, green infrastructure, and environmental enhancement of urban areas).

Transportation
TRPS Issue Statement
5.6 Managing urban transport systems and urban development. 12.4 Significant land transport issues.
Assessment Summary
• Significant investment in transportation infrastructure is required to accommodate urban growth. • Develop infrastructure, including transport infrastructure required for urban development. • The RMA, Sec 7 i), requires particular regard to be had to climate change which is relevant to the transport section and related infrastructure.
Recommendation
Retain (with updates): Recognise that current road transport trends are likely to be unsustainable, and that different transport solutions must be incentivised. Retain (with updates): While Issue 12.4 recognises that vehicle usage contributes to greenhouse gas (GHG) emissions, the issue could be amended to better reflect climate change considerations and mitigation such as encouraging reductions in vehicle emissions and promoting sustainable modes of transport and infrastructure to support active transport options.

Climate Change (proposed new issue)
Proposed new TRPS Issue Statement
Responding to climate change risks and impacts, including the need for mitigation and adaptation measures.
Assessment Summary
• Climate change increases pressure on resources. • Sea level rise and increased flood events will place pressure on infrastructure, such as the 3-waters (wastewater, stormwater, and freshwater), roads, bridges footpaths and cycleways, wharves and jetties, and public reserves. New resource use pressures may also arise, such as the exposure through flooding of former refuse dumps adjacent to rivers or the coast. • Council's Climate Change Strategy identifies negative climate change impacts, including increased coastal hazard risk on roads and other infrastructure, and rain events overwhelming stormwater systems. • Significant cost in relocating infrastructure that is vulnerable to climate change effect such as sea level rises, intensity of storm events, and storm surges.
Recommendation
Add a new issue identifying climate change as a regionally significant issue that will exacerbate many of the other significant issues. This includes the additional stress and risk placed on existing and new infrastructure and energy sources.

Waste Management
TRPS Issue Statement
10.5 The effects of generating and disposing of contaminant wastes.
Assessment Summary
• Resource conflict with concerns about locations of landfill options and the impact on the land and water and sites.

Recommendation
Retain (with updates): Issue to be retained as a regionally significant issue, but amended to reflect current context, language, and scope. Add a new issue: Incorporate consideration of climate change in relation to waste management (e.g. landfills produce GHG emissions which contributes to global warming; sea level rise and more frequent and severe storm events may expose existing closed landfills in low lying coastal areas and on river margins).

Table 3: Section 35 Report – Efficiency and Effectiveness Review: Significant Resource Management Issues

Summary: The efficiency and effectiveness project included a review of the significant resource management issues identified in the Tasman Regional Policy Statement. This identified issues relating to energy supply and security, climate change effects, resilience to increased sea levels, storm surges and flood events, the quality of the urban and natural environment, and responding to urban growth pressures.

Many of the existing issues are recommended to be retained with updates, while others with a relationship to infrastructure are recommended to be added. These are Climate Change, and Urban Development and Infrastructure.

Nelson Tasman Lifelines Project – A vulnerability Assessment of Lifelines Infrastructure in Nelson - Tasman – July 2016[15]

This report identifies the potential impacts on Nelson-Tasman's infrastructure from major natural hazard events. This report was led by the Nelson Tasman CDEM. The project included an analysis of 'hotspots' (where a number of critical assets are co-located) and 'pinchpoints' (single points of vulnerability in individual networks). It also identifies potential mitigation measures.

The report identifies the critical lifeline infrastructure as:

1. Electricity generation, transmission and distribution (Cobb Dam is the largest generator while the remainder is brought to the region from Christchurch)
2. Fuel supply chain, storage, and distribution (bulk fuel lines and storage at Port Nelson)
3. Telecommunications (mobile and fixed line networks)
4. Broadcasting (Telecommunications, Television, Radio, Maritime Communication – includes Mt Campbell, Takaka Hill, Mt Burnett (Collingwood) and Mt Murchison).
5. Transport (Roads, including regionally significant state highways and locally significant roads), Aerodromes (Motueka and Puramahoi), Ports (specifically Port Tarakohe and Motueka as locally significant).
6. Water, Stormwater and Wastewater (Council has a variety of urban, rural and community supplies, the Regional Sewerage Business Unit (Bells Island) plus separate wastewater reticulation networks, urban stormwater schemes, and stream/river flood protection works and stopbanks)

Many of the lifeline utilities have interdependencies and depend on each other for the functioning of their service. For example, roads enable access to other lifeline utilities such as the port or aerodrome to enable the distribution of supplies and transport of people. Fuel is also fundamental to this transport and supply function.

The report also identifies the key natural hazards for the region – earthquake (liquefaction, faults, ground shaking and slope failure), tsunami and severe weather.

1. Earthquakes represent a significant risk to electricity and telecommunication networks, state highways, water supply and distribution, and wastewater networks.

[15] *Nelson Tasman Lifelines Project, Nelson-Tasman Emergency Management Group, Final Draft Report July 2016.*

2. Tsunami effects in the Tasman District would be focussed on ports and wharves, regional fuel storage tanks (Port Nelson), telecommunications, wastewater treatment facilities, state highways and the coastal road network, and cables and pipes carried by bridges in the coastal area.
3. Severe weather results in floods and high wind events, resulting in flood flows, ponding, slope failure, and wind damage. Infrastructure at risk includes transmission lines which are at risk from wind, and any infrastructure in flood prone areas (substations, exchanges, bridges and roads, water/wastewater and stormwater networks).

Hotspots are identified where a number of critical infrastructure assets converge in an area of risk. Areas within the Tasman District are: Takaka Hill, Nelson-Richmond state highway, and assets along the Waimea Fault (water supply, Kikiwa to Stoke electricity transmission line, Chorus trunk fibre cable and State Highway 63 near St Arnaud.

The report identifies the need to improve the understanding of vulnerability in some sectors, develop protocols around use of priority road routes (and alternative routes), further understand cross boundary infrastructure vulnerabilities in the region and improve hazard knowledge, particularly around landslips.

Summary: Lifeline infrastructure is very important to the region, particularly when considering its continued functioning during natural hazard events. This infrastructure should be appropriately planned, located, and protected in relation to known natural hazards. Interdependencies between infrastructure assets are part of their efficient function. Specific hotspot areas exist in the region where lifeline infrastructure and hazards coincide.

Coastal Risk Assessment for Tasman Bay/Te Tai o Aorere and Golden Bay/Mohua – Dec 2020[16]

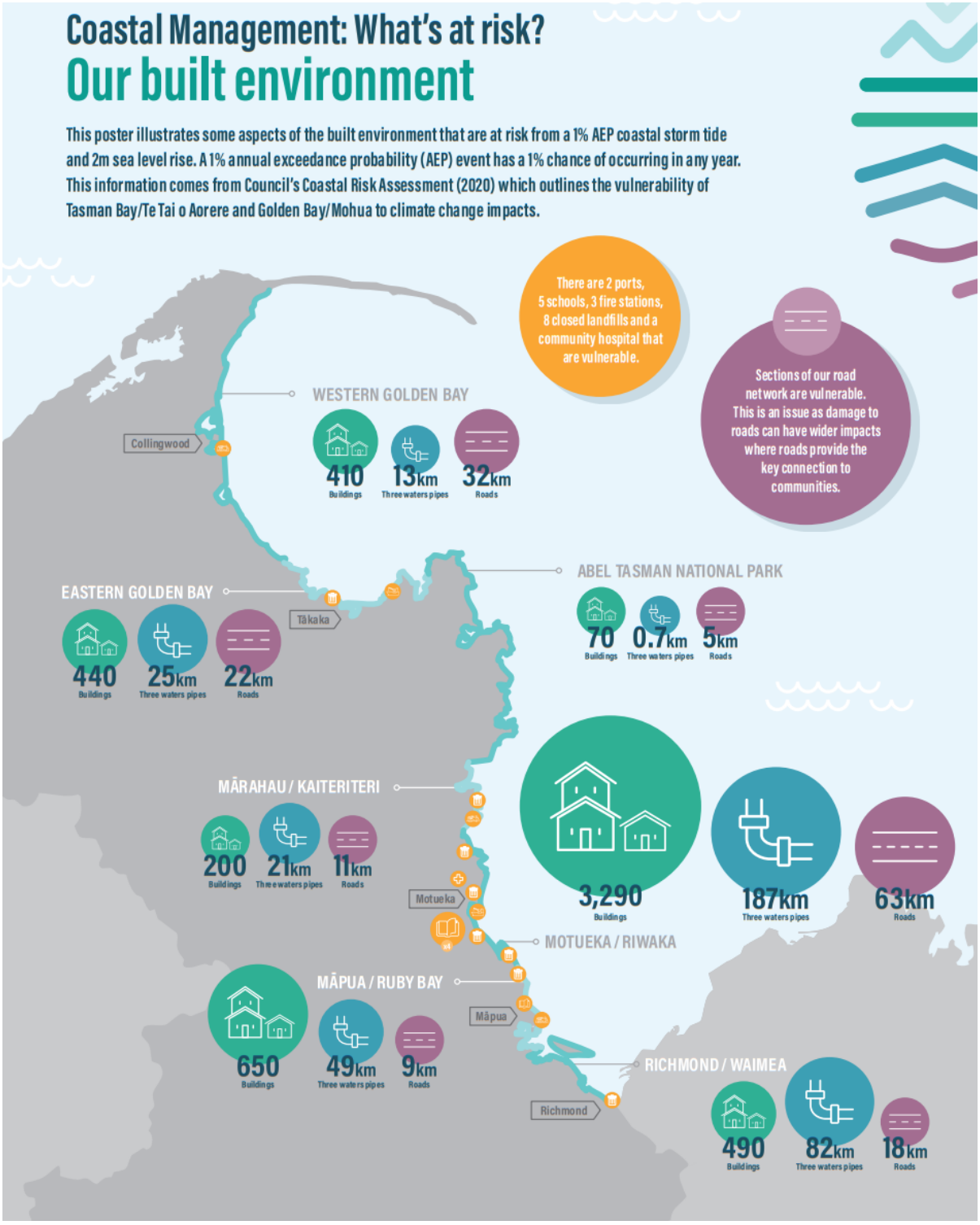
Tasman District Council completed a Coastal Risk Assessment for the district in December 2020. This was part of the wider Coastal Management Project – Responding to Climate Change. A key part of this project was to understand the vulnerability of the region to coastal storm inundation and sea level rise. The assessment identified assets, property, infrastructure and facilities that may be exposed to a present day 1% annual exceedance probability (AEP) coastal storm inundation event and a range of sea level rise scenarios up to 2.0m[17].

Specifically relating to infrastructure assets, the risk assessment found that the following are at risk from coastal inundation and sea level rise:

- Wastewater treatment plants, pipes and pumpstations
- Stormwater pipes and infrastructure
- Water supply pipes
- Roads and cycle paths (both Council and Waka Kotahi)
- Coastal assets (wharves, jetties, access ramps, coastal protection, navigation, ports)
- Eight closed landfills

[16] *Coastal Risk Assessment for Tasman Bay/Te Tai o Aorere and Golden Bay/Mohua, Tasman District Council – Dec 2020*
[17] *Subsequent to this risk assessment being published, the project NZ SeaRise: Te Tai Pari O Aotearoa – funded by the Ministry for Business, Innovation and Employment Endeavour Fund – has published information showing that sea level rise is likely to increase at a faster rate than previously predicted in the Tasman Region. This means that the findings of the Tasman Coastal Risk Assessment report are likely to occur sooner than expected.*

The info graphic below shows the quantity and location of at-risk assets. In total this identifies 377 km of three waters pipes, 160km of road and 5,550 buildings that are at risk in coastal areas of the Tasman District.



Source: Tasman District Council website 'Coastal Risk Assessment'

Summary: Tasman District has a significant length of coastline and a lot of the development and associated infrastructure is located along the coast. Therefore, a substantial amount of infrastructure is at risk from sea level rise and coastal inundation.

Council Asset Criticality Assessment 2019 and ongoing

Tasman District Council has recognised that three waters infrastructure has differing levels of importance to the community and the environment. Infrastructure that is more critical needs to be known, including whether this is at risk from natural hazards. To understand the risk, resilience and criticality of this infrastructure, a work programme continues to be undertaken. This work includes the draft Criticality Framework Report (June 2019)[18] . This approach defines five common criteria that can be used to assess water, wastewater, and stormwater networks for how critical they are. These criteria are:

1. Number of people that would be affected if the asset failed
2. Asset failure that would prevent/impair use of a critical facility
3. Ease of access/complexity of repair
4. Asset failure that has potential for environmental/health/cultural impacts
5. Asset failure that has potential to initiate cascading failures and/or asset has interdependencies with other assets

The resulting criticality score is used in asset management planning and is able to be displayed in a GIS format, overlain with the natural hazard layers.

Of relevance to the Energy and Infrastructure portfolio is the recognition that risk and subsequent resilience of critical infrastructure from natural hazards is an issue of importance to Tasman District Council.

Summary: The criticality assessments seek to understand which infrastructure assets are most critical to the region and subsequently the level of risk to those assets from natural hazards can be determined.

Renewable Energy Assessment, Tasman District, July 2006[19]

This study identified the renewable energy potential in the Tasman District and provides suggestions on how Council can play a role in realising that potential using both regulatory and non-regulatory approaches. It notes that uptake of renewable energy is constrained by a wide range of barriers including technical challenges and costs, but also cultural and environmental concerns surrounding the use of natural resources. This includes concerns around effects on areas of high cultural, ecological and landscape values which limits the areas where renewable projects may be acceptable.

Benefits are also identified including:

- Enhanced security of supply
- Reduced climate change effects
- Address high liquid fuel and electricity costs
- Reduce transmission and distribution constraints
- Reduce uncertainties of supply associated with gas reserves and coal fired power plants
- Economic opportunities around renewable energy technologies.

[18] *Three Waters Network Criticality Assessment Framework and Data Review. Draft June 2019. Tonkin and Taylor Ltd.*

[19] *Tasman District Renewable Energy Assessment, Tasman District, SKM Energy Efficiency and Conservation Authority July 2006. Aspects of this assessment do require updating due to changes in technology, knowledge, and Government direction since 2006. It does, however, provide good guidance for the region. A similar report for the Nelson City Council region was completed in 2013. Due to the rapid changes in this industry, it is likely this requires updating as well.*

The report identifies the renewable energy potential in the region. This comprises of:

- Hydroelectricity primarily consists of the Cobb Dam (32 MW), with additional capacity estimated at 45 MW through mini, small and medium scale projects.
- Ethanol fuel for transport derived from energy crops using around 25% of the available arable land in the region, plus ethanol or electricity from low-grade forestry.
- Wave energy (noting environmental constraints and conflicts with other maritime users).
- Small scale wind power generation.
- Potential for solar thermal systems (hot water) and less for solar photovoltaics (electricity).

Recommendations are made to assist with the development of renewable energy. This includes regulatory actions such as guidance in the Regional Policy Statement and the plan rules, and identifying the location of renewable energy generation resources. Non-regulatory actions are also included such as improving knowledge within Council, developing an energy plan, and working with the industry and other Councils.

Summary: The 2006 report identifies that the Tasman District does have further potential for renewable energy generation including small to medium scale hydroelectricity, ethanol from crops and low-grade forestry waste, wave energy, small scale wind power, and solar systems. The benefits of renewable energy generation are identified which includes increased security of supply, reduced emissions impacting on climate change, and economic opportunities. To realise the potential for renewable energy generation, changes need to be made within Tasman District Council planning documents, including managing the environmental and cultural concerns around some resource use and location.

Initial TEP Consultation Oct – Nov 2020

Feedback from the initial consultation on the TEP development raised the following matters relating to Energy and Infrastructure. These matters were raised by groups such as the Nelson Tasman Climate Forum (and associated Science, Technology and Research Group), Businesses for Climate Action, Zero Carbon Nelson Tasman, Business and Industry (construction, power, telecommunications), community groups and private individuals.

- Council to meet requirements under the National Policy Statement for Urban Development 2020 (NPS-UD) and the Zero Carbon Act 2019.
- Intensification and compact urban form supported
- Active transport and reduced private vehicle use supported, including urban environments which encourage alternative modes of transport
- Infrastructure to be planned
- Infrastructure to be resilient and plan for sea level rise
- The importance of providing for telecommunications infrastructure
- Move to renewable energy sources, and understand future energy needs, including understanding of potential for a reduction in available energy
- Long term infrastructure strategies needed for significant infrastructure, including potential for relocation of at-risk infrastructure
- Adapt to climate change, build resilience, reduce emissions, and prioritise green infrastructure
- Zero waste
- Phase out fossil fuel use, including coal
- Energy security, conservation and sharing
- Importance of hydroelectricity is highlighted, including recognising positive benefits

- Protect natural and sensitive environments
- Alternative energy sources and reduce energy use

Summary: There is a strong theme of responding to climate change and Zero Carbon Act 2019, reducing energy use in particular fossil fuels, promoting renewable energy sources, improving infrastructure resiliency and planning, and promoting active transport.

Tasman Environment Plan Review – Infrastructure and Energy Group

An interest group has been established to represent the various stakeholders in the Infrastructure and Energy space. This includes representatives from a variety of Council departments, industry representatives and environmental organisations. A meeting was held on 6 July 2021 with the core group, and a follow-up meeting with a further energy stakeholder on 19 August 2021. Full meeting minutes are attached as Appendix 4 and summarised below.

- The meeting identified existing infrastructure which included physical infrastructure, lifeline infrastructure, social, health and community infrastructure, plus issues such as funding, ongoing costs, equity, and resilience.
- Emerging infrastructure and issues included, increased electrification, renewable energy sources, micro-mobility, expansion of existing infrastructure, improving resilience, climate change, national planning requirements, circular economy, digital transformation, closed landfills, and aging population.
- Top priorities were identified as:
    - Affordability driving under investment
    - Accommodating growth / development pressure
    - Carbon emissions
    - Landfill specifically to accommodate contaminated land material
    - Reverse sensitivity
    - Resilience to climate change
    - Protection of the natural environment including room for nature
    - Retention of the ability to upgrade existing and build new assets
    - Ports and airports need resilience and funding, and have increasing demand
    - Water availability and supply
- Three core issues were further discussed:
    - Affordability and future resourcing
        - National and global issue
        - Spread out Tasman settlements make infrastructure provision and expansion expensive
        - Potential funding changes
    - Development and growth pressures and planning for the future
        - Increased electricity supply required
        - Integrated planning is key
        - Protection corridors for infrastructure
        - Need certainty in future direction
        - Track infrastructure roll out and identify limits where servicing will not be provided
    - Environmental pressures and impacts on the environment – climate change, resilience, design and siting.
        - National issue but solutions need to be locally focussed.
        - Clear and accessible mapping of information
        - Future planning including retreating from the coast and funding (what can be realistically achieved).

Summary: A wide range of infrastructure will be important to the region, including infrastructure beyond the scope of this specific portfolio. Existing infrastructure needs to be protected and new infrastructure needs to be planned and enabled. Future funding and affordability need to be considered. The natural environment and areas of significance need protection. Climate change (carbon reduction), resilience, retreat, and hazards are important to existing and future infrastructure. Changing technologies and needs, in particular around energy production and use.

3.2 Issue(s) we are seeking to Address

Using the information, analysis and consultation carried out above, resource management issues relating to the Energy and Infrastructure Portfolio have been identified. These are set out in the tables below. While there are many overlaps between Energy and Infrastructure, the issues are separated into the individual topics for clarity.

Energy

Issue Identification	Discussion
Issue 1: The need to recognise and provide for the benefits of renewable energy generation.	1) Increased use of renewable energy can reduce the reliance on fossil fuels and the subsequent effects of climate change. 2) Renewable energy generation can use a range of energy sources at a range of scales. 3) The scale and nature of renewable energy resources should be identified and assessed to understand potential, and potential locations, within the region. 4) Addressing this issue supports the achievement of carbon reduction and the Climate Change Response (Zero Carbon) Amendment Act 2019. It also supports the Aotearoa New Zealand's Emissions Reduction Plan, and the Infrastructure Strategy. 5) Use of renewable energy sources (particularly local sources) to increase energy security, reduce the use of fossil fuels both in terms of being a pollutant and being a finite resource, and reduce long term adverse effects on the environment. 6) The current TRPS objectives require a reduced dependence on non-renewable energy resources. Issue 12.2 promotes efficient energy uses. 7) Introducing specific objectives and policies addressing the benefits of renewable energy generation assist applicants and regulatory authorities in knowing what is expected when considering renewable energy generation activities. 8) Renewable energy generation is considered a matter of regional significance. 9) The National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG) includes policies directing actions from Council. The policies include statements which: - Require the recognition of the national significance of renewable energy generation. - Require the recognition of the practical implications of achieving New Zealand's target for electricity generation from renewable sources. - Require particular regard to be had to the practical constraints associated with new and existing renewable electricity generation. - Require the management of other activities to avoid reverse sensitivity effects on consented and existing renewable electricity generation activities. - Require the incorporation of provisions in regional policy statements and regional and district plans relating to solar, biomass, tidal, wave and ocean current resources; hydro-electricity resources; wind resources and geothermal resources to the extent applicable to the region or district. - Require objectives, policies and methods relating to small and community scale renewable electricity generation.

	- Require objectives, policies and methods relating to investigation, identification, and assessment of renewable electricity generation opportunities. - Provide timeframes for giving effect to the policies of the NPS-REG.
Issue 2: Adverse effects of renewable energy generation activities.	1. Renewable energy generation activities can have adverse effects on the environment. This varies greatly depending on the specific activity and its location. This also varies depending on the timeframe from short-term maintenance activities, medium-term construction activities and long-term operational activities. 2. Adverse effects can be more significant in areas with identified values such as cultural, ecological, or landscape / natural character. The review of the TRMP will include updated locations and identification of these areas. Many will be derived from RMA s6 'Matters of National Significance'. An adverse effect may be acceptable outside of these areas but not within them. 3. Specific provisions are required to give an increased level of protection to those areas with identified values. Existing activities within those identified areas may be able to continue operations where the level of effect does not increase. 4. Renewable energy generation activities of a larger scale, such as commercial scale solar, or larger hydro-electricity generation, can also have an increased level of adverse effect. 5. Adverse effects require identification in terms of areas and overlays where an activity may not be acceptable. In other areas where an activity is contemplated any adverse effects will still need to be avoided, remedied, or mitigated. Where there is uncertainty of adverse effects the NPS-REG does allow regard to be had to adaptive management measures. Where adverse effects cannot be avoided, remedied, or mitigated the NPS-REG states regard shall be had to offsetting measures or environmental compensation. 6. Issue 12.1 of the Regional Policy Statement recognises the environmental effects of energy resource development as an issue.
Issue 3: Operational and functional needs of renewable energy generation activities, including protection from reverse sensitivity effects.	1. Renewable energy generation activities have operational and functional needs relating to their ongoing use. These need to be recognised within the Tasman planning documents. 2. The operational and functional needs can vary depending on the environment and the generation activity. 3. The operational and functional need of renewable electricity generation (under the NPS-REG) can be in conflict with other national priorities such as coastal or freshwater protection through the relevant NPS or Coastal Policy Statement. 4. The NPS-REG recognises the operational and functional needs of renewable electricity generation as being practical constraints through Policy C1. This includes logistical or technical practicalities associated with developing, upgrading, operating, or maintaining the generation activity. It also recognises that location is important, for example the need to be able to feasibly connect a renewable electricity generating activity to the national grid. 5. Inappropriate subdivision, use and development, including intensification of activities near to consented or established renewable energy generation activities can result in reverse sensitivity effects. This may constrain the energy generation activity and limit its operation and the realisation of the benefits from its operation. NPS-REG (Policy D) specifically requires the management of activities that may result in reverse sensitivity effects.

Table 4: Identified Energy issues

Infrastructure

Issue Identification	Discussion
Issue 1: The need to recognise and provide for the benefits of infrastructure in enabling social, economic, environmental, and cultural well-being.	1. Infrastructure, including transport infrastructure, provides essential services to people and the community, including meeting their social, economic and cultural needs. Infrastructure is also critical for their health, safety, and wellbeing. 2. The benefits derived from infrastructure can be felt at a local, regional or national level depending on the specific infrastructure involved and whether it is regionally significant infrastructure. A local road may only serve a handful of properties, while a state highway is important at a regional and national level. 3. Introducing specific objectives and policies addressing the benefits of infrastructure assist applicants and regulatory authorities in knowing what is expected when considering infrastructure proposals. 4. The current Tasman Resource Management Plan objective 15.2.2 seeks efficient and effective network infrastructure to meet the community's needs. 5. Well designed, sited, and managed infrastructure can have positive benefits in relation to improving resilience to climate change effects. The New Zealand Infrastructure Strategy 2022 – 2052 recognises the benefit that reducing carbon emissions from infrastructure can have on achieving net-zero carbon emissions for the country.
Issue 2: The establishment, ongoing use, and maintenance of infrastructure can have adverse effects on the environment.	1. Infrastructure activities can have adverse effects on the environment. The effects can vary greatly depending on the specific activity and its location. This also varies depending on the timeframe from short-term maintenance activities, medium term construction activities and long-term operational activities. Typical effects relate to visual, traffic, noise, vibration, sedimentation effects, effects relating to urban growth, and cultural matters. 2. Not all adverse effects can be avoided, remedied or mitigated. The benefits of the activity may need to be balanced against the residual adverse effects. 3. Above ground infrastructure, or visible infrastructure in areas of identified value, can have a higher degree of adverse effects. 4. Infrastructure that involves the emission of electric fields or radiofrequencies may generate a level of perceived adverse effect even if shown to meet applicable requirements. 5. Construction effects are generally short to medium term and can have a greater degree of adverse effect than the longer-term operation of the asset, particularly for underground infrastructure. 6. Infrastructure can utilise corridors or cluster in suitable areas to reduce the overall level of adverse effect to a region or neighbourhood. This can also reduce cumulative effects.
Issue 3: Adverse effects on the environment from infrastructure can be less acceptable in areas or sites with identified significant values.	1. The Tasman Environment Plan portfolios include a number of items relating to RMA s6 'Matters of National Significance', which involves identification of those areas through the planning maps and potentially other means in terms of sites of cultural significance. These areas, and others of identified value, can experience a higher degree of adverse effect from the establishment of new infrastructure, and from any intensification of existing infrastructure. 2. Specific reference is made to adverse effects in culturally significant areas through the Iwi Management Plans. 3. The level of adverse effect might be acceptable outside of these areas but not within them. Specific provisions will be required to address this issue to recognise and provide for the areas of identified significant value and protect them from inappropriate use and development for the infrastructure purposes. Specific recognition of the need for regionally significant infrastructure will be required.
Issue 4: Operational and functional needs of infrastructure	1. Infrastructure assets and activities have operational and functional needs relating to their ongoing use, these need to be recognised within the Tasman planning documents.

activities, including protection from reverse sensitivity effects.	2. The operational and functional needs vary depending on the environment and the specific infrastructure activity. 3. These operational and functional needs must be provided for to enable the ongoing efficient and effective operation of the infrastructure asset. Without this the benefits of the infrastructure will not be fully realised, and further adverse effects may arise. 4. Infrastructure may also have an operational or functional need which results in specific design or location. For example, large scale photovoltaic systems for energy generation will need the ability to connect to supply lines either locally or through the national grid, and drainage systems will need to respond to hydrological conditions and topography to successfully function. 5. The operational and functional need of infrastructure, including regionally or nationally significant infrastructure can be in conflict with other national priorities such as coastal or freshwater protection through the relevant NPS or Coastal Policy Statement. 6. The National Policy Statement on Electricity Transmission (NPS-ET) specifically includes reverse sensitivity matters on the electricity transmission network in the objectives. 7. Inappropriate subdivision, use, and development, including intensification of activities near to consented or established infrastructure assets can result in reverse sensitivity effects. This may constrain the use of the infrastructure asset and limit its operation and realisation of the benefits from its operation. The Section 35 assessment found there was little support for the management of reverse sensitivity effects in the current Tasman Resource Management Plan.
Issue 5: Coordination of existing development and planned growth including the need to accommodate growth.	1. Infrastructure and land-use, in particular urban growth and development, are intertwined. They require planning to ensure a co-ordinated approach is achieved with infrastructure supporting and enabling urban and business growth. This co-ordinated planning can also achieve more efficient and effective infrastructure provisions. 2. This coordinated planning is central to the Council's various infrastructure related activity management plans (see Appendix 2), the 30-year Infrastructure Strategy, Council's Long Term Plan, and is a key feature of the integration of growth planning in the FDS 2022. 3. The NPS-UD (Policy 10) requires that local authorities engage with infrastructure providers to achieve integrated land use and infrastructure planning. In addition, for sufficient development capacity to be available it must be plan-enabled and infrastructure-ready which requires an integrated and co-ordinated planning approach. This needs to be supported by the resource management planning documents.
Issue 6: Infrastructure needs to be resilient to natural hazards and climate change effects.	1. Infrastructure is often located in areas subject to natural hazards and climate change impacts. This includes the coastlines, river margins, fault lines, and areas of instability amongst others. Many of the potential effects are being accentuated by the results of climate change. This can be increased rainfall events and intensity, sea level rise or storm surges. 2. Infrastructure provides many benefits to people and communities, and well-functioning infrastructure has reduced adverse effects on the environment. A lack of resilience to natural hazards and climate change effects can mean that these benefits are lost or reduced and that adverse effects on the environment can occur. This includes adverse effects on cultural matters such as those caused by accidental discharges from a wastewater system impacted by storm surges or heavy rainfall events. 3. The location and design of new infrastructure and the protection and management of existing infrastructure are important factors in increasing resilience. 4. The Nelson Tasman CDEM group has undertaken the Nelson Tasman Lifelines Project (2016) which considers the vulnerability of lifeline infrastructure in Nelson / Tasman. This highlights the need to plan and manage infrastructure

	to improve its resilience and ability to support the district during a natural hazard event. 5. Tasman District Council has also undertaken a Coastal Risk Assessment (2020) which highlights how much of the region's infrastructure is at risk from climate change effects on the coast. This demonstrates the issue that exists in the district which must be addressed. 6. The New Zealand Infrastructure Plan (2022-2052) and the draft National Adaptation Plan (May 2022), along with Council infrastructure documents all identify the need for resilient infrastructure to support the country and the region.

Table 5: Identified Infrastructure issues

3.2.1 Regional Significance of Issue(s)

The environmental effects of energy resource development and the promotion of efficient energy uses is currently identified in the Tasman Regional Policy Statement. This has been reassessed through the efficiency and effectiveness review of the significant resource management issues in the TRPS and is recommended to be retained and updated in line with national direction. This includes to incorporating energy's relationship to climate change, and the promotion of renewable energy generation.

The TRPS only has passing mention of infrastructure within the Urban Development Issue, in particular, around the relationship of urban growth to infrastructure provision. In light of this, the efficiency and effectiveness review has highlighted the need to include a specific regionally significant issue for Urban Growth and Infrastructure. In addition, infrastructure is recommended to be added, or strengthened, as a relevant factor into the following regionally significant issues:

- Cross Boundary Effects
- Urban Design and Development
- Transportation
- Climate Change (proposed new issue)
- Waste Management

Consideration should also be given to including a further regionally significant issue relating directly to infrastructure itself. This could include the protection of existing infrastructure from incompatible uses, and the recognition of the benefits of regionally significant infrastructure.

3.2.2 Why Change is Needed (or Not)

Change is required in Tasman's planning documents to respond to the increasing national direction, setting the need to provide infrastructure which supports the region, and the country's needs. The national and local direction also demonstrates that this infrastructure needs to be resilient and well planned in relation to urban growth. It should assist with the country meeting its net-zero carbon emission goals and work towards a circular economy. The need to respond to climate change effects and to reduce the contribution to climate change is also of growing significance.

There is also increasing national direction in relation to increasing the amount of renewable energy generation undertaken and a corresponding reduction in fossil fuel use. This matter is featured in many national level government documents and Council's own documentation.

The Tasman Resource Management Plan requires strengthening of existing provisions, or new provisions (Objectives, Policies and Methods, including rules) to respond to these matters and the issues identified in this report.

The draft Natural and Built Environments Act outcomes (Appendix 1) includes a specific outcome relating to the ongoing provision of infrastructure to support the well-being of people and communities including the use of land for economic, social and cultural activities, plus a specific reference to the generation, storage, transmission and use of renewable energy. Changes to the Tasman planning documents will assist with achieving this draft outcome.

The National Planning Standards require a specific Energy, Infrastructure and Transport chapter which also drives the need for change in this portfolio.

3.2.3 Issue(s): Waahi-Specific or Whole of District?

Council must implement integrated management of natural resources. This will be supported by the ki uta ki tai guiding principle, where everything is connected – from the mountains to the sea. To achieve this, the TEP process will consider natural resource use, protection and enhancement spatially across Tasman in seven waahi (places). The waahi are based on groupings of catchments where there are communities with shared values and interests that are likely to affect natural resources in those catchments. Consideration of issues and options across all the resource management functions within each waahi will allow for identification of conflicts or overlaps between different issues, as well as synergistic options that provide for multiple outcomes sought within the waahi.

Waahi planning is at its core a means to:

- Coordinate management of interconnected elements/resources (natural, cultural, social, economic and physical).
- Take into account the impacts of management of one element/resource on the values of another, or the environment.
- Ensure resource management approaches across administrative boundaries are consistent and complementary.
- Ensure strategic outcomes are identified for each waahi, promoting healthy ecosystems and ecosystem services, and associated objectives, policies and methods that negate the risk of exceeding environmental bottom limits.
- Ensure principles of Te Tiriti O Waitangi are taken into account.

Table 6 below identifies if the issue occurs in a specific waahi or across the whole of the district.

Planning Issue	**Waimea**	**Moutere**	**Motueka - Riuwaka**	**Abel Tasman - Kaiteriteri**	**Takaka**	**Aorere – West Coast**	**Upper Buller**
All issues for Energy and Infrastructure	Applies to all						

Table 6: Planning Issues and where they occur

Activities and structures relating to both Energy and Infrastructure can occur across the district in all Waahi planning areas. Infrastructure does concentrate in areas of urban development and areas of more intensive use. In many cases, these areas are in the lower and more coastal parts of the district. In addition, some infrastructure, such as roads, transmission lines and telecommunication facilities, can occur in remote parts of the district. Energy generation can also occur in a variety of areas and is less likely to be concentrated around existing developed areas.

The issues relating to resilience and contribution to climate change response apply across the district, as do the benefits derived from well planned infrastructure and energy generation.

3.3 How Issues relate to Iwi Interests and Values

The TEP plays an important role to supporting the expression of kaitiakitanga and rāngatiratanga. Iwi resource management priorities and leadership may be realised through provisions of the TEP. An innovative plan will support aspirations for managing ancestral whenua and taonga in the Tasman District and across Te Tau Ihu. To achieve Te Oranga O Te Taiao, Te Mana o te Wai and Te Mana O Te Tangata, this report has considered the following strategic outcomes:

- Respectful partnerships and governance structures supporting council and iwi collaboration, in the Tasman District and across Te Tau Ihu are established and strengthened.
- Te Tiriti O Waitangi principles and customary rights inform a resource management framework to support iwi resource management values and priorities within the TEP.
- Iwi connections and access to cultural landscapes, sites of significance and heritage are protected and restored.
- Economic and cultural development is enabled through access to and the use of cultural redress resources, Te Tiriti O Waitangi settlement land and taonga, including the coastal environment, in accordance with Settlement Acts and Statutory Acknowledgments.
- Environmental limits and targets are set to achieve meaningful cultural, environmental and economic outcomes, enhancing the mauri of Te Taiao.
- Integrated management is supported by a ki uta ki tai philosophy enabling the application of tikanga and Mātauranga Māori to TEP provisions.

For each issue identified in this report the relationship to the above outcomes will be identified

3.4 Statutory and Policy Context

Both the Energy and Infrastructure components of this portfolio are wide ranging topics with effects across the district and across the Country. As such, a wide range of statutory documents have relevance. Appendix 2 contains a more complete summary of key and relevant statutory documents. As a high-level summary, the following items provide the statutory direction for this portfolio:

Legislation / Policy Document	Discussion
Resource Management Act 1991	Part 2 of the RMA 'Purpose and Principles' has many aspects with direct or indirect relevance to Energy and Infrastructure: • Section 6 'Matters of National Importance' - Energy and Infrastructure is not directly identified but does have potential effects on the listed matters. • Section 7 'Other Matters' directly relevant items are: - s7(ba) The efficiency of the end use of energy - s7(i) the effects of climate change - s7(j) the benefits to be derived from the use and development of renewable energy - many other matters also have relevance • Section 8 'Treaty of Waitangi' provides direction to take into account the principles of the Treaty of Waitangi when making in relation to managing the use, development, and protection of natural and physical resources, including Energy and Infrastructure activities.

	• Section 30 and 31 set specific requirements for Councils to provide sufficient infrastructure to support housing and business land and ensure that there is strategic integration of infrastructure and land use.
Local Government Act 2002 (LGA)	Section 3(d) is one of the four purposes of the LGA 2002 to take a sustainable development approach to the well-being of their communities and includes the requirement to meet the current and future needs of the community for good-quality infrastructure, local public services and the performance of regulatory functions (Section 17A – Delivery of Services).
Climate Change Response (Zero Carbon) Amendment Act 2019	This Act focuses on Government level policies for climate change adaption and mitigation, including setting domestic GHG emission reduction targets to zero by 2050. This Act guides many recent government plans and policies.
National Policy Statements and National Environmental Standards	The National Policy Statement for Urban Development, Freshwater Management, Electricity Transmission and Renewable Electricity Generation, plus the New Zealand Coastal Policy Statement 2010 (NPSPS) all have direct relevance to both Energy and Infrastructure. NESs for Freshwater, Telecommunication Facilities, Sources of Drinking Water are also relevant.

Table 7: Statutory and Policy Context

3.5 Methods Considered

Consideration of options to address identified issues and achieve desired outcomes fall into six main categories that are within the functions of Council:

- Regulation (through the Tasman Environment Plan)
- Investigation and Monitoring
- Education, Advice and Advocacy
- Works and Services provided by Council
- Financial assistance
- Community Partnerships

Other methods may also be undertaken by iwi, industry, or community groups, which play an important role in achieving the outcomes sought in the Tasman District, however these aspects fall outside the scope of the options considered in this report, except indirectly where they may be supported by a council function or service (for example financial subsidy or technical assistance for a community group project).

3.5.1 Implementation Plans

Any regulation options identified will be implemented through the development of the TEP. Any other non-regulatory methods identified will be actioned through a separate Implementation Plan that is released for community feedback alongside the Draft TEP.

The intent of the Implementation Plan will be to outline and cost the non-regulatory methods for inclusion in other council processes including funding through the Long-Term Plan process and implementation through the Activity Management Plans.

3.4.2 Emerging Issues

The majority of the issues relating to energy and infrastructure have been apparent for many years. Although they are not fully expressed in the Tasman Resource Management Plan or the Tasman Regional Policy Statement. Some of these issues are, however, becoming more prominent through increasing Government direction and through increasing acknowledgement of, and knowledge around, climate change effects. The emerging themes which relate to the identified issues are:

Resilience: Climate change effects and natural hazards can have significant effects on infrastructure, including those classified as lifeline utilities. Responding to these threats requires increased resilience. The need for resilient infrastructure and energy sources is a feature of the national Infrastructure Strategy and the draft National Adaptation Plan. Resilience is also a key component of recent Council workstreams regarding coastal risk assessments and asset criticality assessments. These focussed on the risk to infrastructure and facilities.

Climate Response: NPS-REG 2011 requires Councils to provide for renewable energy generation and recognise sources of this energy which reduce fossil fuel use. The Climate Change Response (Zero Carbon) Amendment Act 2019 sets a zero-carbon emissions target. The national Energy Efficiency and Conservation Strategy 2017, Infrastructure Strategy 2022 and the draft Adaptation Plan 2022 all direct carbon reduction and for infrastructure to respond to climate change issues. This is also a feature of many of Council's own strategic planning documents and is included in Iwi Management Plans.

Urban Growth: The region is experiencing urban growth pressures, as are many areas of New Zealand. This growth results in the need to provide new infrastructure and in many cases upgrade the capacity of existing infrastructure. It also highlights the need to continue with co-ordinated planning for infrastructure and land use. This co-ordinated planning is required through the RMA, the NPS-UD and the LGA 2002.

4. Issue 1 – 3 Energy

The three distinct issues relating to the Energy portion of this portfolio are addressed as a group within this section of the report. Each issue is interrelated and assessing the options relating to Energy in a cohesive way is preferable to assessing each issue individually.

The three identified issues are:

Issue 1: *The need to recognise and provide for the benefits of renewable energy generation.*

Issue 2: *Adverse effects of renewable energy generation activities.*

Issue 3: *Operational and functional needs of renewable energy generation activities, including protection from reverse sensitivity effects.*

4.1 Outcome(s) Sought

Outcome 1: The generation and use of renewable energy is encouraged and enabled within the Tasman District.

The generation and use of renewable energy have direct benefits in responding to climate change by reducing carbon emissions from non-renewable fossil fuel use. It also increases energy security within the region. Achieving this outcome supports Government direction to reduce carbon emissions and support the well-being or New Zealand and its people and environment. At the same time, the economic benefits should be realised, and people and communities supported in an equitable transition. This outcome responds to issue 1.

Outcome 2: The adverse effects of renewable energy generation are managed at a level appropriate to the location and type of activity.

Renewable energy generation can take a range of forms, scales, and locations. This can be solar panels (photovoltaics), wind power, hydroelectricity, wave energy, energy generation from crops or low-grade forestry waste, and other emerging energy sources and improvements in efficiency. All these activities can be at a range of scales from serving single homes / businesses through to commercial or regional scale layouts. This outcome seeks that the adverse effects are managed in a manner commensurate with the form, scale, and locations of the renewable energy generation activity. Areas with identified significant value are especially vulnerable to the potential adverse effects from energy generation activities. This outcome responds to issue 2.

Outcome 3: The operational and functional needs of renewable energy generation activities is provided for, and reverse sensitivity effects are managed.

Renewable energy generation activities have operational and functional needs to ensure that their benefits can be efficiently realised. Recognising this in the Tasman planning documents can assist with determining locational requirements (functional needs) which may be related to where the renewable energy resource is available, or where connections to other required networks or infrastructure is possible. Reverse sensitivity is an issue when a more sensitive activity establishes near to a renewable energy generation activity and experiences adverse effects from this. This can constrain the continued and efficient operation of the generation activity and the outcome is that the planning documents provide a level of protection from this occurrence. This outcome responds to issue 3.

4.2 Scale and Significance

	Comments	Assessment
Degree of change from the status quo	Adding specific provisions in relation to Energy to the Tasman planning documents will result in new provisions applying. Therefore, there will be a moderate degree of change from the status quo. This will include increased recognition of, and provision for the activity, and management of its potential adverse on areas of identified value in particular.	Moderate
Effects on matters of national importance (s6 RMA)	Depending on location there is a connection between energy generation and recognising and protecting matters of national importance identified within s6 of the RMA.	Low - Moderate
Scale of effects – geographically (local, district wide, regional, national)	Renewable energy generation and use can occur at a variety of scales and in a variety of locations. Therefore, the effects can occur across the district, and the wider region. Renewable energy generation is also a national issue with effects of energy supply and use being applicable nationally.	Moderate
Scale of effects on people (how many will be affected – single landowners, multiple landowners, neighbourhoods, the public generally, future generations?)	Direct effects on people are generally limited to those in the immediate vicinity of the renewable energy generation activity. In some cases, a new, large scale generation activity may have effects on people beyond those in the immediate vicinity. There is also a less direct but wider public and community benefit to be gained from the increased use of renewable energy.	Low - Moderate
Scale of effects on those with particular interests, e.g. Tangata Whenua	Various iwi of Te Tauihu have expressed an interest in the Energy portfolio through the Iwi Management Plans. This includes the climate change benefits, the need to avoid sensitive areas, the desire to be involved in energy generation activities, and the desire to be involved in the decision making around energy activities.	Moderate
Degree of policy risk – does it involve effects that have been considered implicitly or explicitly by higher order documents? Does it involve effects addressed by other standards/commonly accepted best practice?	There are many Government level policy documents which give direction and set requirements in relation to the Energy portfolio, in particular around renewable energy generation and use. Changes within the Tasman policy documents are intended to be consistent with this national direction and therefore result in a low level of policy risk.	Low
Likelihood of increased costs or restrictions on individuals, businesses, or communities.	The change to renewable energy generation and use is part of the wider Government direction to achieve zero carbon emissions by 2050. Nationally, it is recognised through the Aotearoa New Zealand Emissions Reduction Plan 2022 that this shift will result in impacts on individuals, business and communities, and that an equitable transition is required.	Moderate

Table 8: Scale and significance

4.3 Options to address the Issue

The main options to manage the three key issues identified in section 4 are summarised in Table 9 below.

Option Number	Option Name	Description of Option
Option 1	Status quo	Retain the current RPS/TRMP approach
Option 2	Strengthened and specific provisions relating to energy	Amend the existing RPS/TRMP provisions and introduce further provisions to support renewable energy generation and use.

Table 9: Options Identified – Energy

These options are described in turn below, followed by an assessment of their strengths and weaknesses.

4.3.1 Option 1 – Status Quo

4.3.1.1 Current approach

The Regional Policy Statement (RPS) and the Tasman Resource Management Plan (TRMP) contain current provisions relating to Energy. These are limited at the TRMP level. The following provisions feature:

Regional Policy Statement and Tasman Resource Management Plan
Urban development and efficient use of energy: RPS Objective 5.6 directs that the urban form and location promotes the efficient transmission and use of all forms for energy. This is supported by the following:

- TRMP Objective 6.2.2.2 seeks urban growth and re-development that encourages efficient use of energy.
- A number of objectives and policies in the TRMP which seek energy efficiency in relation to urban development.
- Direction for the design of transport routes and alternatives to private cars are to achieve energy efficiency.
- Matters considered during consent processing for subdivision include energy efficiency[20]
- Rules enabling solar panels to exceed height limits and daylight recession planes in certain circumstances.

Efficient use and managing adverse effects: Energy Objective 12.1 seeks efficient use of resources for the generation and distribution of energy in a manner which manages adverse effects on the environment. This is supported by Policy 12.1.

Energy Objective 12.2 seeks conservative and efficient use of energy and a reduced dependence on non-renewable resources. This is supported by Policy 12.2.

- Section 30.0.2 'Uses and Values of Water' references the benefits of hydropower generation, and provisions in chapters 28 and 31 relating to water use, provide for small scale hydro generation as permitted activities.

[20] *Rule 16.3.3.3 restricted discretionary matters 29 and 30.*

- Air Quality policies[21] advocate for the use of solar energy and sustainable design to reduce solid fuel burner use.

Nuclear energy: Energy Objective 12.3 seeks that there is no risk of contamination from radioactive material or irradiating apparatus.

- This is supported by Policies 12.3 and 12.4 which oppose energy generation from radioactive material, and nuclear-powered vessels.
- Rule 16.7.3.1 prohibits generation of radioactive material and energy from such material.

TRMP Part V Water specifically notes that there are no rules in relation to taking or using heat or energy from water, including coastal water, and that these activities will be addressed directly through Section 14 of the RMA.

4.3.1.2 Assessment of Strengths and Weaknesses of the Status Quo

Strengths	Recognises the relationship between urban growth and energy efficiency. Recognises the need to manage the adverse effects of energy generation. Recognises the importance of efficiently using energy. Provides for renewable energy generation in some situations eg: small scale hydro.
Weaknesses	No specific objectives or policies recognising the need for resilient energy generation. No identification of the need to support the functional and operational needs of energy generation. No identification of the need to protect energy generation activities from reverse sensitivity effects. Lack of rules enabling and managing energy activities. Does not explicitly recognise the NPS- REG[22] and requires updating to incorporate this.

Table 10: Assessment of strengths and weaknesses of the status quo

4.3.2 Option 2 – Strengthen provisions relating to Energy

4.3.2.1 Strengthened and specific provisions

Due to the issues identified in relation to Energy and the requirements of the National Planning Standards to include Energy within a separate chapter, a revised set of provisions within the Tasman planning documents is proposed. This is option 2.

Should this option be progressed, it would feature the following approach:

[21] *Policy 34.1.3.12 g)*

[22] *Reference Appendix 3, Section 35 report, TRMP Chapter 15*

- Recognition of, and provision for, the NPS-REG
- Objectives which:
    - Recognise the benefits and operational and functional needs of renewable energy generation, recognising the regional or national significance of the activity.
    - Provide for renewable energy generation
    - Seek to manage adverse effects, particularly on the areas of identified significant values
    - Recognise the need to use energy efficiently, including through urban development
- Policies which:
    - Build on the direction set in the objectives
    - Provide for existing activities and for managing reverse sensitivity
    - Recognise the differing scales and nature of renewable energy generation
    - Seek efficient use of energy
    - Recognise the aspirations and level of involvement sought by iwi
- Rules which:
    - Enable specific small scale energy generation (for example solar, wind, micro-hydro)
    - Allow for the ongoing maintenance and operation of energy generation activities
    - Allow for investigation activities relating to energy resources
    - Separately manage small, community and large-scale generation activities
    - Recognise activities of regional or national significance
    - Restrict non-renewable energy generation activities
- Standards which:
    - Manage specific allowances (size, height etc.) for renewable energy generation structures
- Non-notification provisions:
    - Consider non-notification provisions for certain activities
- Other methods:
    - Non-regulatory methods to promote renewable energy use and energy efficiency.

4.4 Relevant Waahi per Option

As noted in section 3.2.3, Energy is a topic that is relevant across all Waahi in the district. There will be focal areas where the energy resource is available. This will vary based on the type of energy resource and generation method, and by scale. Small scale generation for individual homes can occur in any location while larger scale would require a wind, solar, water or tidal source of suitable intensity.

Rivers are one area of potential concentration of renewable energy generation. The suitability of this in certain circumstances will need to be further explored with iwi, freshwater ecology and policy specialists, and the energy sector.

4.5 How does this Issue Relate to Iwi Interests and Values?

As identified through the Iwi Management Plans, activities within the renewable energy space are of interest to Mana Whenua of Te Tauihu. Matters that have been raised are:

- The benefits of renewable energy use, and the efficient use of energy in terms of climate change benefits
- The need to avoid sensitive areas (such as the coastal and river margins), and areas of significant values (such as culturally and environmentally important areas)
- The need to maintain access to important cultural sites
- The desire to be involved in energy generation activities.

The energy use and generation related objectives and policies, and the provisions relating to Tangata Whenua partnership and involvement more generally within the Aorere ki uta, Aorere ki tai – Tasman Environment Plan, will highlight many of the matters raised in the Iwi Management Plans. This includes identifying the desires of iwi to be involved in developing energy generation opportunities.

Recognising these matters and enabling energy development will assist with redress through Treaty Settlements and the protection of areas of significant values (s6 and s8 RMA).

4.6 Evaluation of all Options

Table 11 summarises the extent to which each option achieves a number of key considerations.

Options to address Issue	RMA Purpose	NBA Outcomes	National Direction	TEP Principles	Efficiency at addressing Issue(s)	Effectiveness at addressing Issue(s)	Strengths	Weaknesses
Option 1	Moderate	Moderate	Moderate	Low	Low	Low	Moderate	Moderate
Option 2	High	High	High	High	High	High	High	Low

Table 11: Evaluation of options

4.7 How does this Issue relate to other Topics?

As noted in this report, there are many relationships between Energy and other topics, legislation, and national direction. This flows through to relationships within the Aorere ki uta, Aorere ki tai – Tasman Environment Plan project.

The following relationships are of particular importance:

Topic	Relationship
Climate Change	The Climate Change topic applies across all aspects of the TEP project. Energy is of particular relevance due to the contribution that the fossil fuel use and inefficient energy use has on climate change. There is also relevance to climate change induced natural hazard frequency, for example storm surges, sea level rise or more intense rainfall events impacting on renewable energy generation. These matters are addressed under the Energy topic where they have relevance.
Natural Hazards	The Natural Hazards topic is relevant to the infrastructure topic in terms of damage to infrastructure that supports renewable energy generation. There is, however, a relationship where local renewable energy generation can improve the energy security in the region. This assists during natural hazard events when other sources of energy may not be readily available.
Rural / Urban	The location and design of urban environments can drive positive (or negative) effects in terms of energy use. Ensuring well designed urban environments is primarily the role for the Urban and Rural topics. In addition, energy generation activities can impact on the amenity of urban or rural areas. Larger scale activities may seek to locate in rural areas. Reverse sensitivity is also a relevant issue in the urban and rural areas.
Freshwater	Hydropower generation – either through run-of-the-river generation, storage, or diversion of water for generation – has effects on freshwater. Close collaboration with the Freshwater portfolio lead will be required.
Transport	Reducing vehicle dependence and having well designed and located roads and connections all contribute to more efficient and reduced energy use. The electrification of the vehicle fleet also plays a role. Energy and Infrastructure

	(including roading infrastructure) are included in a single chapter which enables provisions to be closely developed.
Landscape, Coastal and natural character	Energy generation infrastructure can occur within areas with significant landscape and natural character values, and within the coastal environment, as often the energy resources (such as wind, sun, wave, or tidal action) are available in those locations. This infrastructure tends to be very visible. Conflicts between the requirements of national legislation and policy statements which require protection of those areas, but also seek the promotion of renewable energy generation, may arise. These potential conflicts have been identified and will be managed between the leads in these topics.

Table 12: Relevant topics to the Energy issues

4.8 Issue 1-3 Energy: Recommended Option

4.8.1 Recommended Option

Option Number	Option Name	Description of Option
Option 2	Strengthened and specific provisions relating to energy	Amend the existing RPS/TRMP provisions and introduce further provisions to support renewable energy generation and use.

Table 13: Energy – Recommended option

4.8.2 Assessment and Reasons

Option 2 is recommended because it most closely achieves the purpose of the RMA and the relevant national direction outlined in this report. There is an increasing recognition and direction set by the Government to move towards renewable energy generation, efficient energy use, carbon reduction and energy generation and use that is resilient to climate change. The National Planning Standards require a specific chapter containing the Energy topic (along with Infrastructure and Transport). This combination gives the opportunity to address the identified issues in a holistic manner.

Having a full suite of provisions, from objectives to methods (rules), related to Energy ensures that these provisions can be developed in way to improve the efficiency and effectiveness of how the Tasman planning documents manage energy. The current provisions cover some aspects of energy well but lack in other aspects and do not specifically flow through to the rules.

This approach of having a complete suite of provisions assists with meeting the TEP principles set out in section 2.1. Specifically, the recognition of the benefits of renewable energy generation, the management of the adverse effects of this, and ensuring that the energy generation activities are protected will help to achieve the following principles:

- To enable healthy and resilient communities by achieving healthy and resilient environments (Te Oranga O Te Taiao)
- To meet the present and future needs of our communities and iwi
- To enable community development within environmental limits
- To ensure that the TEP provides strategic leadership for Council's key planning documents.

5. Issue 1 – 6 Infrastructure

The six distinct issues relating to the Infrastructure portion of this portfolio are addressed as a group within this section of the report. Each issue is interrelated and assessing the options relating to infrastructure in a cohesive way is preferable to assessing each issue individually.

The six identified issues are:

Issue 1: *The need to recognise and provide for the benefits of infrastructure in enabling social, economic, environmental, and cultural well-being.*

Issue 2: *The establishment, ongoing use, and maintenance of infrastructure can have adverse effects on the environment.*

Issue 3: *Adverse effects on the environment from infrastructure can be less acceptable in areas or sites with identified significant values.*

Issue 4: *Operational and functional needs of infrastructure activities, including protection from reverse sensitivity effects.*

Issue 5: *Coordination of existing development and planned growth, including the need to accommodate growth.*

Issue 6: *Infrastructure needs to be resilient to natural hazards and climate change effects.*

5.1 Outcome(s) Sought

Outcome 1: Infrastructure is supported within the Tasman District to improve social, economic, environmental, and cultural well-being.

Infrastructure is vital to the functioning of many aspects of the region and the country at all scales. This includes simple services such as water supply to small areas, through to large scale roading networks or wastewater treatment plants. Infrastructure is also vital in terms of including lifeline utilities which assists the region to provide critical daily services that are required for the community's social, economic, and cultural well-being, and to function during times of emergency. A further benefit of well-designed and planned infrastructure is the role that it can have in reducing carbon emissions and promoting the efficient use of energy. Well placed and designed infrastructure can also have direct environmental benefits, such as managing and treating wastewater. This outcome is about recognising the important role that infrastructure plays within the region and responds to Issue 1.

This outcome also includes a response to Issue 4 which requires the operational and functional needs of infrastructure to be provided for, including management of reverse sensitivity effects. Achieving this outcome through planning provisions ensures that infrastructure is supported and is able to operate efficiently.

Outcome 2: The adverse effects of infrastructure are managed at a level appropriate to the location and type of activity.

Infrastructure occurs in a vast variety of forms and locations. An equally vast array of potential adverse effects can occur. Adverse effects are also different during shorter term construction or maintenance activities when compared to ongoing adverse effects from the location and operation of the infrastructure. This outcome seeks that the adverse effects are managed in a manner

commensurate with the form, scale, and location of the infrastructure. Areas with identified significant value are especially vulnerable to the potential adverse effects from infrastructure activities. This outcome responds to Issues 2 and 3.

Outcome 3: Infrastructure and urban growth planning are co-ordinated and occur in an efficient manner.

Co-ordinated growth planning requires co-ordinated planning for infrastructure. This is a requirement of national legislation, policy statements and Tasman District Council's own policy documents. The TEP provides the opportunity to further support and require this outcome to occur. This is particularly relevant around subdivision or rezoning proposals for urban growth, and for the future planning of infrastructure provisions. This outcome responds to Issue 5.

Outcome 4: Infrastructure is resilient to natural hazard events and climate change effects.

Natural hazards and climate change effects such as sea level rise, storm surges, and increased intensity of rainfall events all have significant effects on the operation and continued viability of infrastructure of all types. This outcome seeks to ensure that infrastructures resilience to these events is considered through the consenting process when establishing infrastructure. This outcome responds to Issue 6.

5.2 Scale and Significance

	Comments	Assessment
Degree of change from the status quo	Adding specific provisions in relation to Infrastructure to the Tasman planning documents will result in new provisions applying. Therefore, there will be a moderate degree of change from the status quo. This will include increased recognition of, and provision for the activity, and management of its potential adverse impacts on areas of identified value in particular.	Moderate
Effects on matters of national importance (s6 RMA)	The location of infrastructure, and its construction and operation can have an adverse effect on matters of national importance.	Moderate
Scale of effects – geographically (local, district wide, regional, national)	Infrastructure and its use can occur at a variety of scales and in a variety of locations. Therefore, the effects can occur across the district and the wider region. Infrastructure is also nationally important as part of the wider national network. Examples are state highways and the electricity or communications networks.	Moderate
Scale of effects on people (how many will be affected – single landowners, multiple landowners, neighbourhoods, the public generally, future generations?)	People interact with infrastructure on a daily basis for many aspects of their lives. These activities would be significantly impacted without that infrastructure, or without efficient, well designed, and resilient infrastructure. Infrastructure planning, resilience, and efficiency also affect future generations.	High
Scale of effects on those with particular interests, e.g. Tangata Whenua	Various iwi of Te Tauihu have expressed an interest in the Infrastructure portfolio through the Iwi Management Plans. Of particular relevance is avoiding areas of significant values.	Moderate

	The Te Tauihu Intergenerational Strategy 2020 specifically identifies the need to factor in reduced emissions, security of lifeline infrastructure (resilience), sustainability and circular use of materials.	
Degree of policy risk – does it involve effects that have been considered implicitly or explicitly by higher order documents? Does it involve effects addressed by other standards/commonly accepted best practice?	There are many Government level policy documents which give direction and set requirements in relation to the Infrastructure portfolio, in particular around adaptation, urban growth planning, sufficient infrastructure provision, and reducing emissions. Changes within the Tasman policy documents are intended to be consistent with this national direction and therefore result in a low level of policy risk.	Low
Likelihood of increased costs or restrictions on individuals, businesses, or communities.	Infrastructure provision is a key responsibility for Government and local councils and is a significant cost to the region and country. The Government is progressing with reforms (e.g. the three-waters reform) with the intent to reduce the cost of infrastructure change and growth over time. Any changes to infrastructure provision and operation through the requirements of the TEP are not expected to be significant in terms of the overall cost of physical infrastructure.	Moderate

Table 15: Scale and Significance

5.3 Option(s) to address the Issue

The main option(s) to manage the three key issues identified in section 5 are summarised in Table 16 below.

Option Number	Option Name	Description of Option
Option 1	Status quo	Retain the current RPS/TRMP approach
Option 2	Strengthened and specific provisions relating to infrastructure	Amend the existing RPS/TRMP provisions and introduce further provisions to support and manage infrastructure provision and use.

Table 16: Option identified – Infrastructure

These options are described in turn below, followed by an assessment of their strengths and weaknesses.

5.3.1 Option 1 – Status Quo

5.3.1.1 Current approach

The Tasman Resource Management Plan (TRMP) contains current provisions relating to Infrastructure. These are more limited at the Regional Policy Statement (RPS) level. The following provisions feature:

Regional Policy Statement and Tasman Resource Management Plan

The RPS has limited provisions which directly relate to infrastructure. Those which are identified are:

- Cross-boundary issue (Issue 13.2) includes the need to strategically plan for future urban development, services (e.g. transport), and infrastructure.
- Urban design and development issue (Issue 5.7) identifies that poor quality and under capacity wastewater services are a significant concern to iwi; and, that network services can have adverse effect on the natural environment and can cause widespread public concern.
- Transportation issue (Issue 5.6 and 12.4) identifies that current road transport trends are unsustainable and investment in infrastructure is required to support active transport options.
- Waste management issue (Issue 10.5) identifies the effects of generating and disposing of contaminated wastes.

Infrastructure and urban growth is addressed in TRMP chapter 15 'Strategic Infrastructure and Network Utilities'. This is limited in scope and contains:

- Issues, objectives, and policies (15.1) relating to Waimea Water Augmentation, primarily the Waimea Community Dam[23].
- Issues, objectives, and policies (15.2) relating to the efficient, effective, and integrated provision of network infrastructure assets.

The TRMP also manages infrastructure through Chapter 6, section 6.3 'Urban Infrastructure Services'. The policies refer to the management of infrastructure relevant to urban growth. This requires the NTLDM 2020 to be used for infrastructure development.

Adverse effects of infrastructure on natural character values are identified as an issue through Chapter 8.2, including specific reference to infrastructure in relation to natural inland wetlands. This enables specified infrastructure to occur if there is a functional need and significant national and regional benefits[24].

Resilience / Natural hazards are recognised in terms of their ability to adversely affect infrastructure. Objectives and policies[25] recognise the need for resilience.

Network utilities and public works are provided for in the TRMP. Upgrading an existing facility or construction of a new facility for any network utility[26] is permitted under rules 16.6.2.1 if specified standards are met.

Reverse Sensitivity is identified in terms of subdivision[27] in relation to significant infrastructure facilities and networks. Assessment criteria[28] also identify the cumulative effects of subdivision on infrastructure.

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[23] Rules in TRMP Chapter 18.14 manage activities in the Water Augmentation Infrastructure Area (Waimea Community Dam).

[24] This is repeated in TRMP Policy 12.1.3.5 'Land Disturbance Effects', and 30.1.3.26A 'Taking, using, damming and diverting water'

[25] TRMP Objectives 13.1.2.1 and 13.1.2.2, Policy 13.1.3.10, 13.1.3.17 and 13.1.3.18

[26] 'Network utility' is defined in the TRMP (Chapter 2) and includes pipelines for gas / energy, networks for distribution of electricity, water, telecommunications, drainage, wastewater, roads, airport approaches, street lighting and collection of meteorological information.

[27] Restricted discretionary matter 16.3.3.3 (7)

[28] Schedule 16.3A Assessment Criteria Subdivision (7)

Co-ordinated planning for infrastructure is noted in Section 30.2.30 'Principal Reasons and Explanation' relating to water.

Designations are also contained in the TRMP and provide for infrastructure.

Financial Contributions in terms of infrastructure are still referenced in the TRMP in section 16.5 but the plan makes it clear that where development contributions are required under the LGA 2002 then these are not required.

5.3.1.2 Assessment of Strengths and Weaknesses of the Status Quo

Strengths	Recognises the relationship between infrastructure and urban growth. Recognises the need to provide efficient, effective, and integrated network infrastructure assets. Provides for network utility infrastructure as a permitted activity at the rule level.
Weaknesses	Infrastructure related provisions are not contained in a specific section. Many issues are only briefly identified and managed in specific chapters, rather than across the plan. For example, reverse sensitivity, adverse effects of infrastructure, and coordinated planning all require strengthening. Infrastructure is not identified at the RPS level and has not been consistently included in the TRMP. This results in a lack of strategic direction, particularly when considering regionally or nationally significant infrastructure projects or assets. There is a need to better align the objectives of the plan to achieve better planned urban growth and infrastructure as required by Central Government. The TRMP does not include updated or new provisions relating to the requirements within the NES for Electricity Transmission (NES-ET) and needs to also include updated provisions for other related NPS and NES policy documents. There is no specific reference to the effects of Climate Change at the objective level and the need for greater resilience across the strategic infrastructure network. Other suggested changes are identified in Appendix 3.

Table 17: Strengths and weaknesses of the status quo

5.3.2 Option 2 – Strengthen provisions relating to Infrastructure

5.3.2.1 Strengthened and specific provisions

Due to the issues identified in relation to Infrastructure and the requirements of the National Planning Standards to include Infrastructure within a separate chapter, a revised set of provisions within the Tasman planning documents is proposed. This is option 2.

Should this option be progressed, it would feature the following approach:

- Recognition of the various applicable National Policy Statements, NESs, Coastal Policy Statement, and national direction set out in legislation and guidance.
- Objectives which:
    - Recognise and protect regionally significant infrastructure
    - Recognise the benefits and operational and functional needs of infrastructure, including reverse sensitivity effects
    - Manage adverse effects, particularly on the areas of identified significant values
    - Recognise the need to strategically plan infrastructure and urban development, with specific reference to an efficient and effective transport network
    - Seek a resilient infrastructure network that also responds to climate change impacts and effects, including by reducing the contribution to climate change.
- Policies which:
    - Build on the direction set in the objectives
    - Support and manage regionally significant infrastructure
    - Relate to the transport network, including operation and development of the network, and use of roads as infrastructure corridors
    - Provide for appropriate and planned growth, support the required infrastructure's operational and functional needs
    - Include specific management of infrastructure in areas of identified values
- Rules which:
    - Specifically allow for a variety of infrastructure as a permitted activity (with limits)
    - Specifically manage the relationship to applicable NES provisions
    - Provide for the operation, maintenance, and upgrading of existing infrastructure
    - Differentiate between large and small-scale infrastructure
    - Recognise infrastructure of regional or national significance
    - Differentiate between infrastructure in and out of areas of identified significant values (typically identified by overlays)
    - Contain requirements in relation to specified hazard areas
    - Manage infrastructure involving radiofrequency, electric and magnetic fields, navigation lights, meteorological facilities, warning devices (e.g. for Tsunamis), associated signage and cabinets, and other infrastructure not specifically covered by rules.
- Standards which:
    - Manage specific allowances (size, height, location, operational activities, etc.) for infrastructure assets
- Non-notification provisions which:
    - Consider non-notification provisions for specified activities
- Other methods which:
    - Rely on NESs as relevant
    - Promote the importance of regionally significant infrastructure
    - Include working with other agencies on resilience, including work with the Civil Defence Emergency Management Group.
- An alternative string to this option is to have a separate chapter managing three-waters infrastructure while the main chapter responds to other infrastructure.

5.4 Relevant Waahi per Option

As noted in section 3.2.3, Infrastructure is a topic that is relevant across all Waahi in the district. There will be focal areas where multiple items of infrastructure are closely located. Typically, this is around developed urban areas, including areas of industrial activity. However, other focal areas might be the road network where various items of infrastructure often co-locate, or areas such as

wastewater treatment facilities or electricity substations. Individual infrastructure items can be found widely across the region.

Rivers, wetlands, the coast and coastal margins, areas of identified significant values, and culturally significant areas are all understood to be key areas of interest to iwi. The suitability of infrastructure locating and operating in more sensitive areas needs to be further explored with iwi, freshwater ecology and policy specialists, and the infrastructure sector.

5.5 How does this Issue Relate to Iwi Interests and Values?

As identified through the Iwi Management Plans, infrastructure activities are of interest to Mana Whenua of Te Tau Ihu. Matters that have been raised are:

- Direct opposition to wastewater treatment plants in culturally significant areas, or in flood or inundation prone areas.
- The need to relocate existing infrastructure where it affects the mana, mauri, and wairua of ngā wāhi taonga tuku iho, particularly if it poses a threat.
- The need to avoid infrastructure near significant natural areas and landscapes.
- The desire to participate in the decision-making process to protect cultural values.
- Identification of growth pressures on infrastructure.
- The need for increased resiliency.
- Seeking a reduction in damaging effects on the environment.
- Identification of the interconnectedness of infrastructure and other outcomes sought.

The infrastructure related objectives and policies, and the provisions relating to Tangata Whenua partnership and involvement more generally within the Aorere ki uta, Aorere ki tai – Tasman Environment Plan, will highlight many of the matters raised in the Iwi Management Plans. This includes identifying the desires of iwi to participate in the decision-making process.

Recognising these matters, providing for participation in the decision-making process, and enabling infrastructure development will assist with protection of areas of significant values (s6 and s8 RMA).

5.6 Evaluation of all Options

Table 18 summarises the extent to which each option achieves a number of key considerations.

Options to address Issue	RMA Purpose	NBA Outcomes	National Direction	TEP Principles	Efficiency at addressing Issue(s)	Effectiveness at addressing Issue(s)	Strengths	Weaknesses
Option 1	Moderate	Moderate	Moderate	Low	Low	Low	Moderate	Moderate
Option 2	High	High	High	High	High	High	High	Low

Table 18: Evaluation of options – Infrastructure

5.7 How does this Issue relate to other Topics?

As noted in this report, there are many relationships between Infrastructure and other topics, legislation, and national direction. This flows through to relationships within the Aorere ki uta, Aorere ki tai – Tasman Environment Plan project.

The following relationships are of particular importance:

Topic	Relationship
Climate Change	The Climate Change topic applies across all aspects of the TEP project. Infrastructure is of particular relevance due to its role in improving the efficiency of energy use, and, through improved design and planning, a reduction in embedded carbon and carbon emissions. There is also relevance to climate change induced natural hazard frequency, for example storm surges, sea level rise, or more intense rainfall events impacting on infrastructure assists and planning. These matters are addressed under the infrastructure topic where they have relevance.
Natural Hazards	The Natural Hazards topic is of relevance to the infrastructure topic, particularly in the need to provide for resilient infrastructure that can continue to support the region in an emergency event.
Rural / Urban	The location and design of urban environments go hand in hand with infrastructure provision. Integrated planning is required for successful urban growth, particularly where this impacts on rural land uses. Ensuring well designed urban environments is primarily a role for the Urban and Rural topics, but is supported by the Infrastructure portfolio. In addition, infrastructure activities can impact on the amenity of urban or rural areas.
Freshwater	The location of infrastructure, including water takes and discharges, can impact directly on freshwater. This includes rivers, lakes, wetlands, and groundwater. Close collaboration with the Freshwater portfolio lead will be required.
Transport	Transport is a distinct portfolio in terms of movement of people and goods. However, the infrastructure that supports this movement is part of the infrastructure portfolio. Ultimately Energy, Infrastructure and Transportation are all included in a single chapter under the National Planning Standards, allowing the close relationship of issues to be addressed cohesively.
Landscape and natural character	Infrastructure can occur within areas of landscape and natural character values. Above ground infrastructure can be very visible in these locations. The needs of existing infrastructure to remain in these locations, and for new infrastructure to located in these locations, will need to be carefully considered between the, at times, competing outcomes sought in these portfolios
Coastal Infrastructure	Infrastructure is often required in the coastal environment, and this is recognised through the NZCPS which allows for activities with a functional need to be located in the Coastal Marine Area (CMA). The needs for this infrastructure should be considered against the other requirements of the NZCPS, particularly when, at times, competing policies of the NZCPS require the avoidance of adverse effects in specified areas.
Sites and areas of significance to Māori	Physical infrastructure placement can have significant effects on sites and areas of significance to Māori. The location and methods of protection of these sites will be important in terms of how the two project relate.

Table 19: Relevant topics to the infrastructure issues

5.8 Issue 1-6 Infrastructure: Recommended Option

5.8.1 Recommended Option

Option Number	Option Name	Description of Option
Option 2	Strengthened and specific provisions relating to infrastructure	Amend the existing RPS/TRMP provisions and introduce further provisions to support infrastructure within the region.

Table 20: Infrastructure – Recommended option

5.8.2 Assessment and Reasons

Option 2 is recommended because it most closely achieves the purpose of the RMA and the relevant national direction outlined in this report. The role that infrastructure plays in the functioning of our region and country is being increasingly recognised and features in the Government policy documents that are being released. This is particularly the case in relation to urban development and climate change / energy use reduction.

The need for resilient infrastructure is also being highlighted through national and local documents. Increasing effects from climate change, and from natural hazards, has resulted in the need to plan for a resilient network.

While infrastructure has many benefits, it can also have significant adverse effects. This includes effects on people, the environment, and the economy if poorly design, located and managed. The adverse effects of infrastructure can also impact on cultural values held by iwi of Te Tau Ihu.

Having a full suite of provisions from objectives to methods (rules) related to infrastructure ensures that these provisions can be developed in way to improve the efficiency and effectiveness of how the Tasman planning documents manage infrastructure. The current provisions cover some aspects of infrastructure well, however, other areas are lacking, and significant scope remains to cover all relevant aspects of infrastructure. This accords with the requirements of the National Planning Standards by grouping Energy, Infrastructure and Transport together in one chapter.

This approach of having a complete suite of provisions assists with meeting the TEP principles set out in section 2.1. Specifically, the recognition of the benefits of renewable energy generation, the management of the adverse effects of this, and ensuring the energy generation activities are protected, will help achieve the following principles:

- To recognise the interconnectedness of the environment and people, ki uta ki tai / mountains to the sea
- To enable healthy and resilient communities by achieving healthy and resilient environments (Te Oranga O Te Taiao)
- To work in partnership with iwi
- To meet the present and future needs of our communities and iwi
- To enable community development within environmental limits
- To ensure the TEP provides strategic leadership for Council's key planning documents.

6. Summary

Issue	Recommended Option	Outcome Sought	Assumptions, Uncertainties, Further work, Information Gaps
Issue 1 – 3 Energy	Strengthened and specific provisions relating to energy	1) The generation and use of renewable energy is encouraged and enabled within the Tasman District. 2) The adverse effects of renewable energy generation are managed at a level appropriate	Assumptions: • Government direction will remain consistent in supporting renewable energy generation and use. • Public knowledge and support will continue to grow in this area. Further work: • Additional work is needed to understand the energy resources within the Tasman district.

		to the location and type of activity. 3) The operational and functional needs of renewable energy generation activities is provided for, and reverse sensitivity effects are managed.	• Public engagement on the approach to energy in the district is required. • Detailed engagement will be needed with the energy sector to understand needs and trends, and to test provisions. • Working in partnership with iwi is required, particularly if resources are identified in areas of cultural significance. <u>Information gaps:</u> • Refresh the 2006 (TDC) and 2013 (NCC) energy resources assessments as an updated region wide assessment. • Understand where the resources are found in relation to identified areas of significant value.
Issue 1 – 6 Infrastructure	Strengthened and specific provisions relating to infrastructure	1) Infrastructure is supported within the Tasman District to enable the social, economic, and cultural well-being. 2) The adverse effects of infrastructure are managed at a level appropriate to the location and type of activity. 3) Infrastructure and urban growth planning are co-ordinated and occur in an efficient manner. 4) Infrastructure is resilient to natural hazard events and climate change effects.	<u>Assumptions:</u> • The issues that Government policy is responding to will continue to be experienced – urban growth, climate change adaptation, and the need for resilience. • Council, or an equivalent agency, will maintain a role in infrastructure provision and management. <u>Further work</u>: • Identify where infrastructure intersects with areas with identified significant values. • Public engagement on the approach to infrastructure in the district is required. • Detailed engagement will be needed with the infrastructure sector to understand needs and trends, and to test provisions. • Additional engagement with the infrastructure sector to understand upcoming plans for infrastructure and developing trends that can be managed through the TEP process. • Working in partnership with iwi is required, particularly where infrastructure and identified areas of cultural significance intersect. <u>Information gaps:</u> • A lack of current identification of type, quantity, and ownership of all infrastructure in the CMA. • Knowledge will continue to grow around at-risk infrastructure and associate the risk as advice on sea level rise and climate change effects continues to develop. • There is a potential need to understand economic impact of any proposed changes, or, conversely, the effect of retaining the status quo.

Table 21: Summary of Issues and Options

Appendix 1: Draft Outcomes (from draft Natural and Built Environments Act)

Section 8: Environmental Outcomes

To assist in achieving the purpose of the Act, the national planning framework and all plans must promote the following environmental outcomes:

(a) the quality of air, freshwater, coastal waters, estuaries, and soils is protected, restored, or improved:

(b) ecological integrity is protected, restored, or improved:

(c) outstanding natural features and landscapes are protected, restored, or improved:

(d) areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected, restored, or improved:

(e) in respect of the coast, lakes, rivers, wetlands, and their margins, — (i) public access to and along them is protected or enhanced; and (ii) their natural character is preserved:

(f) the relationship of iwi and hapū, and their tikanga and traditions, with their ancestral lands, water, sites, wāhi tapu, and other taonga is restored and protected:

(g) the mana and mauri of the natural environment are protected and restored:

(h) cultural heritage, including cultural landscapes, is identified, protected, and sustained through active management that is proportionate to its cultural values:

(i) protected customary rights are recognised:

(j) greenhouse gas emissions are reduced and there is an increase in the removal of those gases from the atmosphere:

(k) urban areas that are well-functioning and responsive to growth and other changes, including by— (i) enabling a range of economic, social, and cultural activities; and (ii) ensuring a resilient urban form with good transport links within and beyond the urban area:

(l) a housing supply is developed to— (i) provide choice to consumers; and (ii) contribute to the affordability of housing; and (iii) meet the diverse and changing needs of people and communities; and (iv) support Māori housing aims:

(m) in relation to rural areas, development is pursued that— (i) enables a range of economic, social, and cultural activities; and (ii) contributes to the development of adaptable and economically resilient communities; and (iii) promotes the protection of highly productive land from inappropriate subdivision, use, and development:

(n) the protection and sustainable use of the marine environment:

(o) the ongoing provision of infrastructure services to support the well-being of people and communities, including by supporting— (i) the use of land for economic, social, and cultural activities: (ii) an increase in the generation, storage, transmission, and use of renewable energy:

(p) in relation to natural hazards and climate change,— (i) the significant risks of both are reduced; and (ii) the resilience of the environment to natural hazards and the effects of climate change is improved.

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Appendix 2: Statutory Documents relating to Infrastructure Portfolio

Resource Management Act 1991

RMA definition of Infrastructure:

Section 2 Interpretation

infrastructure *means—*

(a) pipelines that distribute or transmit natural or manufactured gas, petroleum, biofuel, or geothermal energy:
(b) a network for the purpose of telecommunication as defined in section 5 of the Telecommunications Act 2001:
(c) a network for the purpose of radiocommunication as defined in section 2(1) of the Radiocommunications Act 1989:
(d) facilities for the generation of electricity, lines used or intended to be used to convey electricity, and support structures for lines used or intended to be used to convey electricity, excluding facilities, lines, and support structures if a person—
(i) uses them in connection with the generation of electricity for the person's use; and
(ii) does not use them to generate any electricity for supply to any other person:
(e) a water supply distribution system, including a system for irrigation:
(f) a drainage or sewerage system:
(g) structures for transport on land by cycleways, rail, roads, walkways, or any other means:
(h) facilities for the loading or unloading of cargo or passengers transported on land by any means:
(i) an airport as defined in section 2 of the Airport Authorities Act 1966:
(j) a navigation installation as defined in section 2 of the Civil Aviation Act 1990:
(k) facilities for the loading or unloading of cargo or passengers carried by sea, including a port related commercial undertaking as defined in section 2(1) of the Port Companies Act 1988:
(l) anything described as a network utility operation in regulations made for the purposes of the definition of network utility operator in section 166

Legislation / Regulation / Standard	Comment / Relevant Provisions
Resource Management Act 1991	• Section 5 sets out the purpose of the RMA which is to promote the sustainable management of natural and physical resources. The activities associated with Energy and Infrastructure are relevant to many aspects of natural and physical resource use and the social, economic and cultural well-being of people and communities, and their health and safety. These activities are also relevant to the ability for resources to meet the reasonably foreseeable needs of future generations, safeguarding the life-supporting needs of the environment, and adverse effects on the environment. • There are no Section 6 'Matters of National Importance' directly relevant to Energy and Infrastructure, however, this topic does relate to potentially all of those items that must to recognised and provided for as part of achieving the purpose of the RMA. • Relevant RMA Section 7 'Other Matters'

	- s7(a) and (aa) The management of water, natural resources and sites of significance in relation to Energy and Infrastructure is a fundamental part of kaitiakitanga and the ethic of stewardship. - s7(b) Infrastructure management and energy use and generation is fundamental to the efficient use and development of natural and physical resources. - s7 ba) The efficiency of the end use of energy. - s7(f) Maintenance and enhancement of the quality of the environment requires management of the activities relating to energy and infrastructure. - s7(g) Efficient energy use and infrastructure development and maintenance relates to the finite characteristics of natural and physical resources. - s7(i) Energy use / generation and infrastructure development / maintenance strongly relate to the effects of climate change. - s7(j) the benefits to be derived from the use and development of renewable energy. • Section 8 requires the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) to be taken into account when making decisions in relation to managing the use, development, and protection of natural and physical resources. This is of direct relevance to the Energy and Infrastructure portfolio and is consistent with the expectations of the Iwi Management Plans lodged with Tasman District Council. • Infrastructure management is a district planning function under s31 (1) (aa) (district) of the RMA, and also a regional planning function in terms of providing sufficient infrastructure to support development capacity for housing and business land, s30 (1) (ba) (regional). The relationship between district and regional functions in the infrastructure space is highlighted by s30 (1) (gb) which requires the strategic integration of infrastructure with land use through objectives, policies, and methods.
Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 (incorporated into the RMA)	• Enables increased density of residential development for Tier 1 Councils. Tasman District Council is Tier 2 but can elect, or be directed, to utilise these provisions. • Nationally significant infrastructure is a qualifying matter that Councils can protect when implementing these density standards.

National Planning Instruments

National Policy Statements

- **National Policy Statement for Urban Development 2020 (May 2022 update incorporating the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021) (NPS-UD)**
    - The new NPS UD supports further urban development.

    - Further development of infrastructure may be required to support this development capacity.
    - Decisions on urban development are integrated with infrastructure planning decisions.
    - Local authorities engage with infrastructure providers to achieve integrated planning.
    - Requirements for the Future Development Strategy to identify infrastructure requirements and the be informed by the infrastructure strategy.
- **New Zealand Coastal Policy Statement 2010 (NZCPS)**
    - Objective 2 relates to preserving the natural character of the coastal environment and protecting natural features and landscape values.
    - Policy 6 recognises and provides for infrastructure.
    - Policy 25 encourages infrastructure to be located away from areas of hazard risk where practicable.
    - Contains provisions for recognising and providing for renewable energy and energy transmission.
- **National Policy Statement for Freshwater Management 2020 (NPS- FM)**
    - came into force on 3 September 2020
    - Includes a definition for specified infrastructure 'a) infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002), b) regionally significant infrastructure identified as such in a regional policy statement or regional plan, c) any public flood control, flood protection, or drainage works carried out: i) by or on behalf of a local authority, including works carried out for the purposes set out in section 133 of the Soil Conservation and Rivers Control Act 1941; or ii) for the purpose of drainage by drainage district under the Land Drainage Act 1908'. The TEP needs to align with this.
- **National Policy Statement on Electricity Transmission 2008 (NPS-ET)**
    - Councils are required to give effect to the provisions of the NPS-ET
    - NPSET sets out an objective and policies relevant to the management of the effects of the electricity transmission network.
    - Objective recognises the national significance of the electricity transmission network and requires it to meet the needs of present and future generations while managing the adverse effects of the network, and adverse effects of other activities on the network.
    - Relates to the national grid which are assets owned or used by Transpower NZ Limited.
    - Manages adverse effects of the network and also the adverse effects of other activities on the network.
- **National Policy Statement for Renewable Electricity Generation 2011 (NPSREG)**
    - Supports renewable energy generation as a means to address the effects of climate change and the vital role that renewable energy plays in the wellbeing of New Zealand, its people and the environment.
    - Relates to matters of national significance under the RMA.
    - The objective is to recognise the national significance of renewable energy generation.
    - Particular regard shall be had to the infrastructure to support renewable electricity generation, and to connect to the national grid.
    - Contains a number of policies requiring district plans to include provisions relating to renewable energy sources and generation.

National Environmental Standards

The portfolio recognises and works with the NESs listed below but does not intend to duplicate their provisions unless necessary. Council does remain responsible for enforcing those standards.

- **Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FW)**

    - Came into force on 3 September 2020
    - Includes guidance around the maintenance and operation of specified infrastructure and other infrastructure. The TEP needs to align with this.
- **Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008 (NES-TF)**
    - Prescribes standards for installing and operating telecommunication facilities, and activities surrounding that.
- **Resource Management (National Environmental Standard for Electricity Transmission Activities) Regulations 2009 (NES-ET)**
    - Sets out standards for transmission activities and only applies to existing high voltage transmission lines.
- **Resource Management (National Environmental Standard for Sources of Drinking Water) Regulations 2007 (NES-SDW)**
    - Sets requirements for protecting sources of human drinking water, focusses on activities, water permits, and discharges that may affect water quality.
    - Also manages activities that may affect abstraction points.

National Planning Standards 2019

- **National Planning Standards, 2019**
    - The National Planning Standards group energy, infrastructure, and transport into a single chapter.

Other standards and legislation:

- **NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances.**
    - Sets out standards for earthworks, construction, and other activities near to electrical lines and supports.
- **NZS4404:2010 Land Development and Subdivision**
    - NZS 4404:2010 provides local authorities, developers, and professionals with criteria for design and construction of land development and subdivision infrastructure. The Standard encourages sustainable development and low-impact design for infrastructure networks and facilities.
- **Transport related legislation:**
    - Land Transport Management Act 2003
    - Land Transport Act 1998
    - Government Roading Powers Act 1989
    - Government Policy Statement on Land Transport 2018
    - Road User Charges Act 2012
    - Plus, a variety of regulations found at Our legal framework | Waka Kotahi NZ Transport Agency (nzta.govt.nz)
- **Climate Change Response (Zero Carbon) Amendment Act 2019**
    - Amends the Climate Change response Act 2002
    - Provide a framework for New Zealand to develop and implement clear and stable climate change policies.
    - Sets domestic greenhouse gas emissions reduction targets to zero by 2050.
    - Focussed on Government level policies for climate change adaption and mitigation.
- **Local Government Act 1974 (LGA 1974)**
    - LGA 1974 contains sections 319-345 which relate to Council's obligations in relation to roads, service lands and accessways. This does not include regional roads.
- **Local Government Act 2002 (LGA 2002)**
    - Requires Council's to create and operate within a 30-year Infrastructure Plan.

- Section 3(d) is one of the four purposes of the LGA 2002 sets direction for a sustainable development approach to the well-being of their communities and includes the requirement to meet the current and future needs of the community for good-quality infrastructure, local public services and the performance of regulatory functions (Section 17A – Delivery of Services).

- **Electricity (Hazards from Trees) Regulations 2003.**
  - Sets rules around trimming of trees / vegetation to ensure electrical safe distances are maintained.
- **Telecommunications Act 2001**
  - Legislation relating to the supply of specified telecommunication services in New Zealand. This includes 2018 amendments to regulate the Ultra-fast Broadband system and the removal of copper lines where fibre is in place.
- **Utilities Access Act 2010 and the National Code of Practice for Utility Operators' Access to Transport Corridors**
  - The code is produced under the Act to provide access to transport and utility corridors. The code recognises that efficient access to the corridors is required to operate and manage network utilities which is critical to the country's economy and the community's quality of life.
- **Civil Defence Emergency Management Act 2002**
  - CDEM plans are prepared under the CDEM Act for each CDEM group. These plans cover emergency response and recovery matters, but they can also cover hazard risk reduction (such as avoidance of hazard-prone land, making provision for infrastructure that mitigates flooding risk, or planning evacuation routes).

Tasman Region Planning Documents

Council documents:

- **Nelson Tasman Land Development Manual 2019 with 2020 revision (NTLDM).**
  - Provides consistent minimum standards and guidance for network assets that Council will accept as part of its network, and activities affecting them including maintenance and operations.
- **Future Development Strategy (FDS) 2019**
  - The FDS 2019 is a high-level growth strategy covering both the Tasman and Nelson regions. It takes into account broad infrastructure considerations when identifying areas for future growth and assists the Council to address its obligations under the NPS on Urban Development Capacity 2016 (prior to the NPS-UD). Implementation of the FDS requires a range of plans and strategies to be reviewed and updated as part of its implementation. These include RMA policy statements and plans, long term plans, regional transport plans and infrastructure strategies.
  - The requirements for the FDS have been amended as a result of the NPS-UD coming into effect. The FDS 2022 is currently being developed and will replace the FDS 2019.
- **Tasman Climate Action Plan 2019**
  - Sets internal emissions targets in line with the Climate Change Response (Zero Carbon) Amendment Act 2019.
- **Tasman District Council Infrastructure Strategy – Contained in the Tasman District Council Long Term Plan 2021 – 2031.**
  - Shows how Council will care for public assets and investments.
  - Identifies key issues relating to infrastructure provision and option for addressing those, including financial implications.
  - Is a 30-year plan required by the Local Government Act 2002.
- **Te Tauihu Regional Land Transport Plan 2021**

- The plan sets priorities for state highway, Department of Conservation and Council transportation initiatives.
- It forms the basis for Waka Kotahi NZ Transport Agency (Waka Kotahi) to decide which proposals will be included in the National Land Transport Programme.

- **Regional Public Transport Plan 2021 – 2031 (RPTP)**
  - Details the investment programme required to enable public transport as part of a sustainable transport future and achieving the carbon emission reduction targets.
- **Tasman District Activity Management Plans 2021**
  - Tasman District Council has a variety of Activity Management Plans of relevance to the Energy and Infrastructure portfolio. These are mostly infrastructure focussed and include:
    - Water Supply Activity Management Plan 2021-2051
    - Wastewater Activity Management Plan 2021-2051
    - Waste Management and Minimisation Activity Management Plan 2021-2051
    - Transportation Activity Management Plan 2021-2051
    - Stormwater Activity Management Plan 2021-2051
    - Coastal Assets Activity Management Plan 2021-2051
  - Council has an obligation to manage the districts assets and deliver its activities in an effective, cost-efficient, sustainable, well-planned and coordinated manner. Activity Management Plans outline the strategic direction for Council's key activities and links this to the levels of service that we have set to achieve anticipated outcomes for our community.

Iwi Management Plans

- **Ngati Rarua Environmental Plan 2021**
  - Discharges - 7.3.2 Tikanga – Policies and methods

    III Oppose the location of wastewater infrastructure and treatment plants on or near ngā wāhi taonga tuku iho or mahinga kai.

    IV Oppose the location of wastewater infrastructure in flood or inundation-prone areas to minimise the risk of overflow events.
  - Nga Wahi Taonga Tuku Iho 8.2 Tikanga – Policies and methods

    VI Oppose the location of new infrastructure on or near ngā wāhi taonga tuku iho.

    VII Require the relocation of existing infrastructure where it affects the mana, mauri and wairua of ngā wāhi taonga tuku iho.
- **Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan 2018**

  Energy

  11.4.1 Energy Generation - Aspirations
  - Heritage landscapes and landform are protected
  - Have access and use of important cultural sites
  - Ngāti Tama right to develop energy is recognised and provided for
  - Focus on alternative sustainable energy generation and use

  11.4.2 Energy Generation – Issues
  - Energy generation can contribute to emissions, long term climate change and impact on cultural values
  - Unsustainable harvest and use of fossil fuels
  - Loss of indigenous vegetation, ecosystems, landscape and cultural heritage sites
  - Damming and diverting waterways for energy generation impacts on ancestral land, waters, wāhi tapu and mahinga kai areas

  Infrastructure

11.4.1 Aspirations (Energy Generation)

- Avoid infrastructure near significant natural areas and landscapes

11.6.4 Indicators (National Park Management)

- Visitor activities are concentrated in areas which have been approved by Ngāti Tama (areas with appropriate infrastructure in place).

12.4.1 Aspirations (Wastewater Management)

- Ngāti Tama to participate in decision making to protect cultural values in the management of wastewater
- Advocate for wastewater infrastructure to be located away from waterways and coastal environment if they pose a threat

12.7.2 Issues – Subdivision and Development

- Pressure on infrastructure to provide for urban development outside of urban areas

12.7.2 Issues – Coastal Access

- Increased public pressure for access to the coast increases the pressure for infrastructure

- **Te Tauihu Intergenerational Strategy 2020**

  Papa Whenua: Infrastructure

  One of eight Intergenerational Wellbeing Outcomes

  - *We must design and deliver transport, water, and waste systems that service our needs, without damaging the environment, and to actively protect our region from natural events.*
  - *Our people have resilient transport, communications and energy networks, and water and waste systems.*
  - *When designing or updating infrastructure, we need to factor in reduced emissions, security of lifeline infrastructure (resilience), sustainability and circular use of materials.*

- **Ngati Koata Trust Iwi Management Plan 2002**
  - Avoid foreshore structures in areas of cultural use where there is the potential for adverse effect on cultural values.
  - Ensure that any long-term adverse effects on landscape from land disturbance and earthworks are avoided, remediated or mitigated.

Appendix 3: Strategic Infrastructure and Network Utilities

One page summary - Section 35 Report – Chapter 15 Strategic Infrastructure and Network Utilities

TOPIC - Strategic Infrastructure and Network Utilities	TRMP Chapter 15
ISSUE 1	
Strategic infrastructure is infrastructure that serves a regional or national function. Currently, the operative sections of the TRMP only relate to the Waimea Community Dam, and very recently, Network Utilities.[1] While the provisions of the TRMP are 'on track' to deliver the expected outcomes in relation to these two aspects, there is considerable scope to expand the activities covered under this topic – for example, to cover ports, regional airports, regional landfill/s, energy generation, etc. The lack of provision and protection for some strategic infrastructure means that decision-makers have not been able to prioritise outcomes with regional or national benefits as efficiently as they could have. In addition, some existing strategic infrastructure has very little support in the Plan for its continual operation or protection from adjacent activities or reverse sensitivity effects. Tensions between the provision and operation of strategic infrastructure and the protection of environmental and amenity qualities valued by our communities are likely to continue to arise.	
MANDATORY STATUTORY REQUIREMENTS	
Significant legislative changes have occurred since Chapter 15 was first introduced. Key legislation now has a particular emphasis on aligning planning outcomes with a broad range of infrastructure. These changes include direct changes to Part 2 of the Resource Management Act 1991 (RMA), changes to the functions of Council, and additional requirements under the Local Government Act 2002 (LGA) to produce 30 year infrastructure strategies. In addition, three relevant National Policy Statements (NPS) have been introduced that have direct implications for infrastructure – being NPSs on Urban Development Capacity[2], Renewable Energy and Electricity Transmission. The TEP will need to be updated to incorporate these new requirements.	
DIRECTION SETTING: RECOMMENDATIONS	
1. Retain objectives and policies relating to the Waimea Community Dam and Network Infrastructure as they remain relevant. 2. Strengthen the provisions around Reverse Sensitivity. 3. Extend the scope to clearly include objectives and policies for other strategic infrastructure policies, e.g., for airports, ports, regional landfills, etc. 4. Align and update RPS objectives for Urban Water Network. 5. Implement the relevant objectives to the National Policy Statements on Electricity Transmission, Infrastructure, Renewable Energy and Water. 6. Avoid duplication with Infrastructure –related NESs. 7. Provide greater recognition of the importance of Strategic Infrastructure in relation to planning for climate change and natural hazard resilience. **8.** Ensure policies provide protections for existing strategic infrastructure, not just new infrastructure.	

[1] Networks for the distribution of electricity, water, communications, wastewater, lighting, meteorological information etc. Includes roads and airports.
[2] The NPS on Urban Development Capacity was proposed for change in August 2019. The proposed NPS on Urban Development contains many of the same objectives, but the final version will need to be considered further during the TRMP Plan Review process.

Recommended changes to Chapter 15 as per the Section 35 report

Objective Set	Recommendations
15.1 – Waimea Community Dam	
Objective 15.1.2.1 Creation of a secure supply of water in the Waimea Plains for:	Retain – no need for change as this objective provides context for policies and maps, and any further decisions/variations to consent.
Objective 15.1.2.2 The protection of the Waimea Community Dam site	Retain – no need for change as objective remains relevant.
Policy 15.1.3.1 Identify the location for the Waimea Community Dam	Retain with updates to reflect location secured in Planning maps.
Policy 15.1.3.2 Recognise the benefits to community social, economic and cultural wellbeing of the Waimea Community Dam	Retain – no need for change as policy remains relevant.
Policy 15.1.3.3	Retain - provides matters for particular regard for resource consent variations or any future consent applications.

Objective Set	Recommendations
Assessing resource consent applications for the construction, operation and maintenance of the Waimea Community Dam	
Policy 15.1.3.4 To protect the Waimea Community Dam site and to avoid cumulative adverse effects on river ecosystems and natural flows	Retain – no need for change as there is an on-going need for protection and avoidance.
15.2 – Network Utilities	NA – These provisions are 'Proposed' at time of writing this report. However, feedback has indicated that the Plan could provide a definition of Network Utilities to improve clarity.
Other Actions	**Water** 1. Update to the Principal Reasons in Chapter 15 to account for the 2018 decisions on the Waimea Community Dam. 2. Align and update RPS objectives for Urban Water Network (Water Supply for Urban Development) with TRMP, water supply bylaw, Drinking water standards and upcoming NES on Drinking water sources (where relevant to Strategic Infrastructure). 3. Consider relationships between significant infrastructure and the NPS for Freshwater Management (in relation to wetlands etc.) **Energy** 1. Investigate the series of further actions recommended in the NPS Renewable Energy: TRMP and TRPS Gap Analysis (Appendix 3 of s35 paper). 2. Align RPS Energy policies with TRMP, as the TRMP does not directly address RPS issues on energy generation, transmission or use opportunities, such as micro-generation or large-scale energy generation. **Electricity** 1. Implement the objectives to the National Policy Statement on Electricity Transmission, following outcomes from the Discussion Document on Electricity Transmission (2018, or subsequent versions). Consider protection of Regionally Significant lines; consistency across zones (Richmond South, East and Richmond West). 2. Align new plan provisions and avoid duplication with the NES Telecommunication Facilities. **Infrastructure** 1. Strengthen the provisions around Reverse Sensitivity – consider how to manage reverse sensitivities when prioritising strategic infrastructure. 2. Review NPS UD requirements once gazetted for potential changes in Chapter 15. 3. Align Infrastructure Strategy and planning outcomes where relevant.

Objective Set	Recommendations
	4. Investigate inclusion of other strategic infrastructure policies e.g. for airports, ports, regional landfills, trunk mains etc. Align these with RPS infrastructure Objectives and LGA Strategic Assets (where relevant). 5. Provide clear considerations of NZCPS 2010 policies 7 (strategic planning), 9 (ports), 27 (protection of significant existing development), with potential tie to strategic outcomes from the Coastal Management: Responding to Sea Level Rise project. 6. Provide an ongoing policy relationship with the NTLDM, particularly in relation to road hierarchy and protection of functionality of key road corridors. 7. Provide a link in this chapter to designations. Initiate roll over process for requiring authorities early in the Plan Review process. 8. Provide an explicit recognition of the relationship with TRMP Appendix II – Designations to improve usability. 9. Provide a Designations schedule that clearly differentiates between the two different types of designations (rollovers vs new). Accessibility to information on designations needs to be improved to include dates and conditions. Appendix II is not working well and needs to be fixed. 10. Provide greater recognition of the need for climate change and natural hazard resilience across infrastructure network. 11. Provide for emergency works in relation to strategic infrastructure to deal with more than minor effects. 12. Ensure policies provide protections for existing strategic infrastructure, not just new infrastructure.

Appendix 4: Tasman Environment Plan Review – Infrastructure and Energy Group Meeting Minutes

Tasman Environment Plan Review
Infrastructure and Energy Group

Inception Meeting One: Tuesday 6 July 2021

9:30am – 11:30pm Constance Barnicoat Room, Richmond Library

Attendees:

Robert Derks – Network Tasman Operations Manager	Shelby Macfarlane-Hill – Trustpower Environmental Advisor, Policy
Gillian Pollock - Forest and Bird	Chris Wheatley - Forest and Bird and member of the Biodiversity and Climate Group
Lea O'Sullivan - Waka Kotahi NZ Transport Agency	Andrew James - Waka Kotahi NZ Transport Agency
Kelly Leonard - Port Nelson, Environmental Officer	Mark Ellison - Port Nelson
Graeme McCarrison – Spark, Engagement and Planning Manager	Sue McAuley – Nelson City Council, Engineering Advisor, Transportation
Nathan Clark - Nelson Regional Sewage Business Unit and the Nelson Tasman Regional Landfill	Andrea Meldrum – Tasman District Council Enterprise Portfolio Officer
Jessica Moore – Tasman District Council, Enterprise Portfolio Officer	Leif Pigott – Tasman District Council, Team Leader, Natural Resources Consents
Wouter Woortman – Tasman District Council, Team Leader, Infrastructure Planning	Joseph Thomas – Tasman District Council, Senior Resource Scientist, Water and Special Projects
Drew Bryant – Tasman District Council, Infrastructure Planning Advisor (Transportation)	
Pauline Webby – Tasman District Council	Kathie Fletcher – Tasman District Council
Tania Bray – Tasman District Council	Myaan Bengosi – Tasman District Council
Stephanie Styles (Boffa Miskell) – Tasman District Council	Reuben Peterson (WSP) – Tasman District Council

Inception Meeting Two: Thursday 19 August 2021

9.30am – 10.30am

Attendees:

Jace Hobbs – Accurate Services Limited (PV systems)	Myaan Bengosi – Tasman District Council

Minutes:

The inception meeting in July for the Tasman Infrastructure and Energy Group started with a welcome, an introduction to the process of developing the Tasman Environment Plan, and round of introductions. There was a brief discussion on the draft Terms of Reference, however, no one raised any issues during the meeting. It is noted that prior to the meeting, Sue McAuley clarified that she can only represent the Nelson City Council transport sector. A member of the Nelson City Council three waters infrastructure team was unable to attend on such notice.
A meeting was held in August to capture input from a solar energy stakeholder.
All meetings discussed the key infrastructure and energy we are currently providing, planning for and managing in the district; future infrastructure and energy; and emerging infrastructure and energy. We also discussed key issues and opportunities for providing, planning for and managing infrastructure and energy within the District. It is noted that draft meeting minutes from 6 July 2021 were circulated to Jace Hobbs, and he confirmed that his issues and opportunities had been addressed and recorded. The following is a collation of what we heard:

Infrastructure and Energy; Current and emerging in future (100 years):

CURRENT

- Stormwater infrastructure (WW)
- Relocation Airports
- Transportation network and freight corridors
- Waimea Dam
- Water mains and treatment
- Wastewater pipes
- Nelson/Tasman Regional Sewage System
- Energy - production of bymass
- Solar Power
- Hydro power
- Intake Catchments
- Wastewater treatment infrastructure
- Electricity – Substations
- Ports (Mapua, Riwaka, Tarakohe, Motueka)
- Electricity transmissions lines
- Social infrastructure – parks and reserves, schools
- Fuel storage
- Telecommunications
- Flood management (stopbanks etc)
- Landfill and recycling centres
- Digital cables
- Coastal defences
- Waste management – transfer stations
- Water Supply
- Housing and Commercial development
- Digital equity – access to technology
- Resilience of current infrastructure
- Funding
- Ongoing infrastructure costs
- Health infrastructure
- Equity – youth and elderly
- Public transport

EMERGING

- Networks – power, stormwater
- EC Charging systems
- Coastal defences/protection and coastal retreat
- Food storage
- Energy sources - wind, hydrogen, marine
- Distribution generators, community housing needs
- Waste management / minimisation – transfer stations
- Closed landfills – particularly close to the coast
- Emerging new water supplies, expansion of current supplies and storage
- Tourism infrastructure
- Expansion of ports and airport – master-planning for Motueka
- Three waters – interaction with another organisation
- Housing and Commercial development
- Micro-mobility – autonomous vehicle ie: Drones, e-bikes
- Parking
- Digital transformation
- Provide for areas that are technology free
- Ownership of infrastructure – global organisation investing in NZ infrastructure
- Social infrastructure
- Council amalgamation
- Human resources
- Home heating
- Monitoring systems
- Healthy habitats and environments
- Building resilience into infrastructure
- Circular economy – wastewater, stormwater
- Climate Change modelling
- Funding
- National Planning framework and how we meet those requirements
- Ongoing costs to maintain infrastructure
- Social licence to operate
- Boomer retirement; Older people retiring, mobility access
- Health infrastructure
- Equity – youth and retirement
- Only port in NZ that does not have rail access; provision at the port to have rail.
- Public transport

List of current key issues and opportunities that are relevant to district and service providers:

TOP PRIORITIES

- Short term focus on rates affordability – resulting in under investment in key infrastructure
- Growth; key issues, more people wanting to travel, a continued challenge to accommodate this
- Transport carbon emissions – growth and vehicle emissions
- Provision for infrastructure vs environment
- Development pressure on infrastructure – Connecting to existing infrastructure which is not large enough and needs expanding

- Regional sewage unit – wastewater capacity
- Regional landfill unit – not putting general contaminated land material into general landfill. Another facility to except contaminated soils
- Reverse sensitivity and growth pressures – need to protect what is essential and managing growth
- Port Nelson – resilience infrastructure to enable port operation, transport network, fuel supply and storage and distributing from there.
- Growth pressures – unsustainable urban environment and planning for growth
- Resilience to climate change and protecting and restoring the environment
- Clean air and room for native plants and animals to flourish
- Trustpower - maintaining existing infrastructure and the ability to continue the required maintenance infrastructure
- Ability to upgrade existing assets and build new ones where necessary
- Lack of commercial infrastructure and capacity for growth
- Ports and airports – not a lot of users, need ability to fund expansion – demand increasing – difficulty in funding as a resilient user. Port Tarakohe ONL restrictions.
- Water – availability and supply. Climate change and demand.

NEXT PRIORITY NOT ADDRESSED IN THE LIST ABOVE

- Resourcing how we do it all
- Development being stopped, red tape, community concern
- Uncertainty on the rate of change, building too soon makes it a redundant cost, infrastructure expensive – challenge to anticipate change.
- Access to and availability of water, resource available and what future demand will be.
- Well-designed pre-fab housing at a flat rate. Affordability.
- Infrastructure development should have a net environment gain
- Limited options for retreat – Keeping existing infrastructure operating , affordability
- Coastal protection and transport networks
- Natural hazard responses – lifeline and civil defence space
- Access and ease of maintenance of pipe work for Regional Sewage Network
- Regional Landfill – planning for future capacity, bridging both Nelson and Tasman Region.
- Cost of energy and how we deal with the environmental costs.
- Community expectations for energy and infrastructure
- Community and transport accessibility particularly young and old.
- Community resistance to change – change travel requirements, parking
- Affordability – who is going pay

BREAKOUT GROUP SESISON TO DISCUSS TOP ISSUES:

GROUP 1 – Affordability and future resourcing

- National and global issue
- Need to take into consideration that there is less money due to the pandemic
- People are trying to resource infrastructure and energy but there are so many restrictions
- Question on if growth is actually a good thing with all of the pressure on our infrastructure
- Challenge in Tasman is the spread out settlements. Increases cost and raises the question of how we provide similar quality infrastructure
- Potential options for mitigating this issue?
    - Government tax investment into actual building / houses and apartments

- Have more value for New Zealand products rather than those coming from overseas
- More emphasis on resilience for infrastructure and energy
- Clean air and water should be a priority

GROUP 2 – Development and growth pressures and planning for the future

- National and regional issue
- Amplified issue in Nelson/Tasman as a high growth area
- Electricity is a national level issue (including generation and transportation (national issue) capacity issue)
- Not much hydro and solar in Tasman. Need to bring electricity in from elsewhere, which causes transmission pressure
- More electricity capacity is needed, but the question is around who pays
- Development happening but no financial contributions coming in. The FDS is good because it enables planning. Integrated planning is key.
- Current zoning is good, but there is room for improvement. Need corridors to provide for infrastructure.
- It's difficult for infrastructure providers to plan.
- A need for strategic plans.
- Need an integrated plan between the providers
- Need targets to trigger new actions
- Need to track stages and roll out of development, potentially by using GIS
- Home businesses are challenging for electricity, shut downs effects businesses
- Is there a point where we say stop and that we can't provide services
- Should we be requiring developers to pay full cost
- Difficult areas lead to difficult developers' contributions which leads to users paying
- Need to provide certainty

GROUP 3 – Environmental Pressures and impacts on the environment – climate change, resilience, design and siting

- National and regional issue
- While this is a national issue, need to make sure solutions are grounded in local context and are relevant
- Need for local mapping so issues are clear. Information, data sets and information should be accessible
- Need live monitoring that's appropriate for national scale, but can be extracted at a local level. This will help to make links, for example, between natural hazards and biodiversity
- Need to plan for the future and how we will fund the same (for example, retreating from the coast). Understand what we can and cannot realistically do
- Risk to the road and sea level rise. We should be planning 100 years out and determining how resilient roads will be funded
- Tension between the national need for change now, and the community response needed