

CHAPTER 15: STRATEGIC INFRASTRUCTURE AND NETWORK UTILITIES

15.0 INTRODUCTION

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 and other infrastructure are of national as well as regional importance.

Strategic infrastructure is infrastructure that serves a regional or national function. Infrastructure serving a local function may also have regional or national significance. Strategic infrastructure includes national high-voltage transmission lines, regional airports, regional waste facilities, ports, community dams and some hydro-electricity facilities, telecommunication facilities, roads, water and wastewater reticulation.

The ongoing provision for and protection of network utilities and strategic infrastructure is vital for the social, economic and environmental benefits that accrue nationally, regionally and locally.

There is a need to manage the potential for certain activities to disrupt, or risk disruption to, the safe and efficient operation of network utilities and strategic infrastructure. However, there is also a need to avoid, remedy or mitigate adverse effects on the environment and communities arising from the construction, operation and maintenance of network utilities and significant infrastructure. In many cases, alternative sites for infrastructure are not feasible due to geographic, climatic or economic constraints, or there are scarce resources (such as sites for water augmentation dams). Balancing the competing demands on resources with multiple values requires careful consideration.

In determining the appropriateness of any works, consideration must also be given to climate variability. In the Tasman region the climate is predicted to change so that there are longer periods of drought, warmer temperatures, sea level rise and greater frequency and intensity of storm events.

Construction, operation and maintenance of infrastructural assets may be managed through the Building Act, Public Works Act and the Resource Management Act by planning provisions, consents or designations. The high level of investment for the long-term function of infrastructure services, coupled with community demand for security of supply means that it is appropriate, in most cases, for strategic infrastructure to have long terms of consent.

Consents for activities necessary for development or operation of infrastructure, including on-going maintenance, continue to be required as applicable in the Plan, and decision-making will be guided by the policies in Chapter 15.

15.1 WAIMEA WATER AUGMENTATION

There are currently insufficient water resources to meet existing and future water demand on the Waimea Plains, including community supplies. Water is significantly over allocated in the Waimea Water Management Zones so that existing users' security of supply is unacceptable and there is insufficient water in the Waimea River during periods of low flow to meet the needs of instream uses and values.

This lack of water for current and potential future water demand and use has significant implications for:

- (a) security of supply for water users;
- (b) the maintenance of minimum river and spring flows for instream values, including recreational, community and iwi values;
- (c) coastal seawater intrusion risk, including as a result of sea level rise;
- (d) meeting future water demand, including for urban and industrial development;
- (e) enabling productive use of land, including both irrigated and currently unirrigated land.

The water flow from an augmentation dam may also be managed to provide hydro-electric power. This power generation may improve resource use efficiency.

Chapter 15 is to be read together with the other relevant chapters of the Plan when applying for and assessing applications for resource consent.

15.1.1 Issues

- 15.1.1.1** Meeting existing and potential future water demand in the Waimea Plains for abstractive and instream uses and values.
- 15.1.1.2** Providing for the establishment and continued operation and maintenance of the Waimea Community Dam and associated activities while managing the adverse environmental effects of such activities. C55 9/15
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- 15.1.1.3** Managing conflicts that potentially arise between land use activities and the establishment and continued operation and maintenance of the Waimea Community Dam.
- 15.1.1.4** Ensuring that the benefits to primary sector production provided by the Waimea Community Dam are not lost through changes in land use, particularly rural residential subdivision.

15.1.2 Objectives

- 15.1.2.1** Creation of a secure supply of water in the Waimea Plains for:
- existing and potential demand for rural and urban uses; and
 - protecting and enhancing instream uses and values of the Waimea, Wairoa, Roding and Lee rivers; and
 - allowing for the generation of hydro-electric power.
- 15.1.2.2** The protection of the Waimea Community Dam site from development that is incompatible with the establishment, operation and maintenance of the Waimea Community Dam. C55 9/15
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15.1.3 Policies

Refer to Policy set 30.3.3.
Refer to Rule section 18.14.

- 15.1.3.1** To identify the location for the Waimea Community Dam where activities required to construct, operate and maintain the dam are enabled, and to protect this water augmentation opportunity for the Waimea Plains from incompatible activities. C54 9/15
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- 15.1.3.2** To recognise the benefits to community social, economic and cultural wellbeing of the Waimea Community Dam and associated facilities while managing the adverse environmental effects.
- 15.1.3.3** In assessing resource consent applications required under Parts II, IV, V and VI of the Plan for the construction, operation and maintenance of the Waimea Community Dam and associated infrastructure, to manage adverse effects arising from activities, including subdivision, the removal of indigenous vegetation, land disturbance, water management, public access and other associated activities, by having particular regard to:

- (i) mitigating adverse effects of land disturbance and construction activities on water quality by requiring adoption of best industry practice;
- (ii) mitigating the hazard posed by dam break risks by adopting best industry practice in the design, construction and maintenance of the dam,
- (iii) mitigating or otherwise managing adverse effects on biodiversity through measures including offsets, transplanting and pest control;
- (iv) managing flow releases from the dam to mitigate adverse effects on:
 - (a) recreational value
 - (b) sedimentation and bed stability
 - (c) periphyton growth
 - (d) water quality
 - (e) river ecology
- (v) providing public access up to the dam structure;
- (vi) enabling iwi to salvage argillite and timber taonga that would otherwise be covered by water before commencing to fill the dam.
- (vii) providing for subdivision that supports dam construction while limiting subdivision that could reduce future opportunities to construct a dam.

15.1.3.4 To protect the Waimea Community Dam site and to avoid cumulative adverse effects on river ecosystems and natural flows by restricting opportunities for constructing dams on: C55 9/15
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- (i) the Wairoa River (including the left and right branches) above its confluence with the Lee River;
- (ii) the Lee River from its confluence with the Wairoa River to the boundary of the Water Augmentation Infrastructure Area (Waimea Community Dam) (other than for damming that operates in association with the Waimea Community Dam); and
- (iii) the Roding River from its confluence with the Lee River to the District boundary.

15.1.20 Methods of Implementation

15.1.20.1 Regulatory

- (a) Identifying a Special Area (Chapter 18) for the construction and operation of the Waimea Community Dam and rules regulating land use activities in the Special Area. C55 9/15
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15.1.20.2 Investigations and Monitoring

- (a) Monitoring the pattern of land use, subdivision and development occurring as a result of the increased availability of water.

15.1.20.3 Works and Services

- (a) Providing public vehicle access up to the dam structure.

15.1.30 Principal Reasons and Explanation

The Council has not yet made a decision to proceed with the construction of the Waimea Community Dam. However, Council is signalling through the provisions in Chapter 15 and 18 as well as associated provisions in Part V and VI that it supports the work of the Waimea Water Augmentation Committee (WWAC) to address water shortage issues in the Plains. C55 9/15
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Through these Plan provisions, it makes it clear that it concurs with WWAC findings about the appropriateness of the Waimea Community Dam as the most efficient and effective means of managing water demand and river flows in the Waimea plains.

These Plan provisions are consistent with previous Annual Plan decisions to support WWAC investigations and feasibility studies into the Dam. The decision to construct the dam is acknowledged by Council as a very significant decision and Council recognises that it has very significant consequences both in terms of effects on the environment and financial cost and land use opportunities for people living in the Plains. The decision on whether the dam will be constructed is still to be made.

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In the Council's Long Term Plan, community resilience in the Waimea Plains is supported and developed by the Council through its provisions for the Waimea Community Dam. The Council recognises that significant external funds are needed to make the project viable and is working with the Waimea Community Dam Company to secure additional funding.

The objectives and policies express Council's desire to provide a supportive planning framework to guide decision making on the resource consents that will be necessary for the construction, operation and maintenance of the dam should there be a decision to proceed with construction of the dam.

Policy 1 ensures the location of the Waimea Community Dam is defined on the planning maps in the absence of a designation. Applying a 'Special Area' status to the land enables particular rules to be applied. The Special Area rules are appropriate for the reasons that: the activity is location specific; is occurring over a long time period; recognises the particular qualities of the site which enable the activity of water augmentation to the Waimea Plains to occur; and recognises that sites that provide for efficient water augmentation with manageable adverse effects are a scarce resource.

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Policy 2 ensures that any adverse effects of land uses that would reduce the actual or potential ability of the Waimea Community Dam to be established or operate efficiently are avoided, remedied or mitigated. The policy is intended to safeguard the site for its intended future use as a water storage facility. The lack of viable alternative sites for water storage and augmentation to the Waimea Plains means that it is very important that the land or river does not get developed or used for purposes incompatible with its intended future use.

Policy 3 recognises the particular benefits of the Waimea Community Dam. Policy 4 then recognises that there are specific effects arising from the construction, operation and maintenance of the dam and associated facilities that need to be managed appropriately. The policy includes recognition that some effects may not be able to be avoided, and therefore some form of remediation, mitigation or off-set may be appropriate. This includes ensuring that best industry practice is adopted wherever necessary, especially in relation to the design, construction, operation and maintenance of the dam and managing land disturbance effects.

The dam has a High Potential Impact Classification on the basis of assessing dam break scenarios, which is the main determinant of appropriate design standards. This means that dam design, construction, maintenance and on-going monitoring should be undertaken in accordance with the requirements set out in the NZSOLD Dam Safety Guidelines for High Potential Impact category dams.

There is currently only a small level of public access to the Lee River and the dam will prevent this access. However, this adverse effect will be mitigated by the enhanced recreational values, including for swimming and trout angling, of the Lee, Wairoa and Waimea rivers. Adverse effects created by the dam and its impoundment on biodiversity values and indigenous species will be offset by measures such as enhancement or establishment of similar vegetation communities elsewhere, securing genetic stock from threatened plant populations, pest control and land swap into forest park to protect indigenous vegetation. These environmental mitigation measures, along with harvest of timber and argillite, provide mitigation of adverse effects on iwi and their culture and traditions.

The Council supports the Waimea Community Dam as the best solution to meet the water security challenges in the Waimea Plains. It recognises that adverse effects will occur and will need to be managed. Through Policy 5, it will avoid increasing or adding further risk of adverse effects from other dam proposals in the affected catchments by regulating construction of other dams in the catchment.

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15.1.40 Performance Monitoring Indicators

- 15.1.40.1** A community augmentation dam that is meeting the community's needs for secure water supplies and sustainable water flows in rivers and groundwater.
- 15.1.40.2** The operation and maintenance of a community augmentation dam while managing to avoid, remedy or mitigate adverse effects of such a dam, including maintenance of minimum flows in the lower Waimea River at 1100 litres per second.

15.2 NETWORK INFRASTRUCTURE ASSETS

15.2.1 Issues

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- 15.2.1.1** Adequacy and integration of the design, construction, maintenance, repair and replacement of network infrastructure assets associated with the development of land and use of resources.

15.2.2 Objectives

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- 15.2.2.1** Efficient, effective and integrated provision of network infrastructure assets to meet environmental objectives and the needs of communities for their health and safety, amenity and social-cultural well-being.

15.2.3 Policies

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- 15.2.3.1** To ensure that infrastructure is designed and constructed to avoid, remedy or mitigate the adverse effects of land development.
- 15.2.3.2** To require the design of network infrastructure to take into account the reasonably foreseeable needs of future communities and growth expectations.
- 15.2.3.3** To support an efficient network infrastructure design that includes the environmental costs and benefits over the whole life of the network infrastructure.
- 15.2.3.4** To support an integrated and multi-functional approach to the provision of infrastructure network services and efficient use of land.
- 15.2.3.5** To support efficient and effective network infrastructure design that provides for public health and safety, and community wellbeing.

15.2.20 Methods of Implementation

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15.2.20.1 Regulatory

- (a) Rules relating to the standard of development within new subdivisions and land use activities that require effective, efficient and integrated design of network infrastructure services.
- (b) Mandatory standards of the Nelson Tasman Council Land Development Manual 2019 that specify the design and construction of network infrastructure services.

15.2.20.2 Education and Advocacy

- (a) Best practice matters of the Nelson Tasman Land Development Manual 2019 that guide the design and construction of network infrastructure services.

15.50 ENVIRONMENTAL RESULTS ANTICIPATED

- 15.50.1** Provision of sufficient water to meet the existing and potential future needs of instream uses and values and the needs of abstractive water users including:
- (a) provision of a secure water supply for abstractive use;
 - (b) maintenance of minimum river and spring flows for instream, recreational, community and iwi values,
 - (c) avoidance of coastal seawater intrusion;
 - (d) productive use of land.
- 15.50.2** Maintenance of water quality where it is suitable for the specified uses and values, and enhancement where water quality does not meet the needs of the specified uses and values.