

17. Utilities

17.1 Issues, Objectives and Policies

17.1.1 Resources, Activities and Values

Utilities are the infrastructure which enables a community to undertake its every day activities and functions and allows people to provide for their social and economic wellbeing, health and safety.

There are various categories of public utilities and a number of providers. Public utilities include telecommunications, electricity operations, water supply, stormwater drainage, sewage reticulation, treatment and disposal, roads and airports. The main providers of public utilities are the Council, the Crown, Regional Councils, and some State Owned Enterprises. Recent developments have seen a number of trading enterprises and private companies enter the utilities sector.

The District contains a number of utilities including those of national significance (i.e. Airport, State Highways), regional significance (e.g. hydro power stations), or of local significance (e.g. landfill sites and reticulated services in urban areas). They all involve using, developing or protecting a resource and it is important the Plan provides for utilities, and ensures any adverse effects generated by the utility are avoided, remedied or mitigated.

The provision of utility services is an essential function in the development of land for urban and rural purposes. Furthermore, public utility services have a direct bearing upon the costs and feasibility of development. Advanced planning, both in the allocation of areas for future development and the provision of services adequate for proposed uses, is necessary to ensure reasonable costs of development.

17.1.2 Issues

i Visual Impact and Location

The provision of utilities can involve the erection of structures and overhead services, which can detract from visual amenity, or the character of an area or landscape. The visual impact of these structures may be related to their size (e.g. power stations, airports, pylons, power poles), frequency with which they occur and their scale in comparison with the character of a particular environment. For example, utilities erected on or along a skyline may have a significant visual impact, while small utility buildings in an urban area may have little or no adverse effect.

ii Effect on Amenities

A number of utilities have potentially adverse environmental effects. Major public utilities (e.g. airports) may be required only infrequently but have a high impact in the area in which they wish to locate. Many existing utilities and services were established under previous district schemes and legislation. Some of these utilities may not fit the criteria of the new Plan and existing conditions of operations may not now be appropriate to protect amenity values and the quality of the environment. In some instances locational factors may determine the exact position of a facility but as a general principle service authorities will be encouraged to locate public utilities in areas with characteristics similar to the utility or in a manner which will have few adverse effects on the environment.

The District has high landscape values and certain utilities may not be appropriate in all locations. Residential areas and shorelines, ridges and skylines in the rural areas would be vulnerable to the intrusion of large structures, buildings or pylons. The natural character of lakes and rivers, and habitats of significant fauna need to be protected from inappropriate use and development. Utilities are essential to the welfare of a community and their environmental impacts must be balanced against the community's need for the service or facility.

iii Efficiency

Section 7 of the Act requires that in relation to the use and development of a physical resource (which includes structures) regard be given to efficient use and development. Essential services such as electricity supply, telecommunications or underground water or sewage reticulation must be able to be readily constructed, operated and maintained throughout the District. Where a utility is an accepted element of the environment with minimal adverse effects and is essential for the undertaking of everyday activities, a consent process would incur costs and time delays unacceptable to the provider and user. Rules must therefore enable their establishment and on-going use subject to standards to protect amenity. Other utilities may not be as acceptable, although still essential, due to the effects of their function and or size.

Many utilities involve significant capital expenditure to establish and may have a life expectancy spanning several decades.

The Council can co-ordinate its services and facilities as a means of maximising efficiency and the rate of use. The Second Schedule of the Act provides for Councils to include matters of scale, sequence, timing and relative priority of works, goods and services. The Annual Plan provides the mechanism by which funding and resources are provided for these works. Efficiency of services is also enhanced by co-ordinating services with community development to ensure that utilities are provided where they are needed.

The installation of a wide range of utilities will be at the expense of private developers at the time of development. The costs are then passed on to the purchasers of land or developments. This is more equitable than the costs of new development being met by the Council and its ratepayers as a whole. It is essential standards and specifications are set by the Council and met by developers.

iv Unnecessary Equipment

Utilities can often have an adverse effect upon the environment which can continue after the equipment is no longer required, having been superseded by advances in technology, is no longer in use, or a more

suitable location has been found. The removal of unnecessary equipment, including buildings and masts, can mitigate the adverse effects of having it there in the first place, and can assist in restoring and enhancing the surroundings.

17.1.3 Objectives and Policies

Objective 1 - Co-ordination of Utilities

Co-ordinate the provision of utilities with the development of the District.

Policies:

1.1 *To ensure possible areas for new development:*

- (i) *are readily able to be serviced;*
- (ii) *are located in selected areas where the Council will meet the costs of major works (to be recovered from developers as development proceeds);*
- (iii) *are located in other areas, provided the full costs of upgrading reticulation systems attributable to that development are met and paid for by the developer, and an efficient pattern of development is promoted.*

1.2 *To ensure the provision of utilities to service new development prior to buildings being occupied, and activities commencing.*

1.3 *To ensure the costs of servicing development are:*

- (i) *met by the developer directly or through contributions made to Council at the time of development or the issuing of titles; or*
- (ii) *initially met by Council but recovered as development proceeds; or*

- (iii) *indirectly paid for by the wider public through rating.*
- 1.4 *To ensure the proper management of solid waste by:*
 - (i) *providing landfill sites for the present and future disposal of solid waste;*
 - (ii) *assessing trends in solid waste; and*
 - (iii) *identifying solid waste sites for future needs.*
- 1.5 *To recognise the future needs of utilities and ensure their provision in conjunction with the provider.*
- 1.6 *To assess the priorities for servicing established urban areas, which are developed but are not reticulated.*
- 1.7 *To ensure reticulation of those areas identified for urban expansion or redevelopment is achievable, and that a reticulation system be implemented prior to subdivision.*

Explanation and Principal Reasons for Adoption

Co-ordination between the development of the District and the provisions of utilities and services is necessary to ensure areas are capable of being serviced and that the timing of services facilitates development of an area.

The first part of policy 1 is a preferred option, because it ensures services are easily able to be provided and therefore minimises public costs and use of resources.

The second part of policy 1 allows development of parts of the District which may not be easily serviced, but where development may be desirable on other policy grounds (e.g. visual considerations, minimal risk through hazards, transport costs, urban consolidation or soil protection). This policy allows the Council to sustain resources by managing the form and extent of urban growth by promoting appropriate areas for development.

The third part of policy 1 places the onus of service provision upon the developer and ensures the public as a whole does not meet the costs. A qualification to this option is an efficient pattern of development is achieved which avoids dispersed and disjointed urban expansion.

Policy 2 is directed at avoiding disruption and ensuring the well being of occupants by having services provided prior to buildings being occupied, and activities commenced. There is an expectation by the purchasers of land that such services are available, and for many developments the framework for provision of services is at the stage of subdivision consent.

In most circumstances the costs of servicing development should be met by the developer to the Council's specifications. Initial costs are thus not met by the wider public through the rates, but passed from the developer to the purchasers.

In instances where the Council is interested in seeing a particular area developed, it may be appropriate the Council acts as a banker by meeting the initial costs of servicing development, but recovering the costs as development proceeds.

The third option in policy 3 is where the costs of development are met by the wider public through the rates system. This is appropriate in circumstances where the costs should be spread evenly across the District. An example of this may be a land swap, to ensure an important ecological habitat is not developed.

Landfill for the disposal of solid waste is essential to the District. The existing landfill sites are provided for along with site(s) identified for future facilities. Some adverse environmental impacts may be associated with the operation of the landfill from time to time such as smell, dust and visual detracting. To reduce potential conflicts between the landfill and surrounding activities major buffers will be provided.

Planning in conjunction with utility providers is necessary in order to anticipate their future needs and to meet expectations of land users. Development

within the District will be facilitated and a climate of certainty provided for future planning. Over the life of the District Plan, various new technologies will inevitably be developed, especially in the area of telecommunications, and it is necessary the Plan anticipate these changes.

Intervention to ensure service provision at the stage of subdivision or land use development will also enable the most efficient provision of utilities and avoid potential future problems with inadequate services.

Historically, some parts of the rural area have provided for urban activities and residential use in an ad hoc manner. These activities have not generally been reticulated with services such as sewerage. Reticulation of services is desirable and often necessary to ensure environmentally acceptable disposal of sewage and stormwater. Some isolated residential pockets within the District may not however be appropriate for servicing as this assumes a permanence which may be contrary to cost effective provision of physical infrastructure. Reticulation may signal development in areas which is unsustainable in terms of energy use, soil protection, groundwater qualities, visual and landscape amenity or for other reasons. However, servicing of areas may be unavoidable and necessary to protect groundwater qualities, supply and public health.

Objective 2 - Efficient Use and Establishment of Utilities

The establishment, efficient use and maintenance of utilities necessary for the well being of the community.

Policies:

- 2.1 *To recognise the need for maintenance or upgrading of a utility to ensure its on-going use and efficiency.*
- 2.2 *To take economic costs into account when considering the alternative locations, sites or methods for the establishment or alteration of a utility.*
- 2.3 *To take into account the strategic needs of a utility when considering possible alternative locations for establishment.*

- 2.4 *To make specific provisions for certain activities within the District, which are land extensive and/or which have specific locational needs, to ensure the presence and function of the utility is recognised.*
- 2.5 *To encourage the co-location of facilities where operationally and technically feasible.*
- 2.6 *To have regard to the importance of a utility when determining whether the establishment of a proposed utility will promote the sustainable management of natural and physical resources.*
- 2.7 *To encourage development in areas which are already serviced and have the capacity for additional development and takes into account economic costs; or in new locations where the development has regard to efficiencies through consolidation of activity.*
- 2.8 *To promote waste reduction and recycling.*
- 2.9 *To achieve sustainability of the District's water supplies by:*
 - *encouraging water conservation*
 - *ensuring development is able to be serviced by the water supply system*
 - *assessing the impact of development on water quality and quantity.*

Explanation and Principal Reasons for Adoption

Due to the importance of the role of utilities in providing essential services to the community; their often high capital cost to establish; and their long life expectancy, it is important that the Plan acknowledges the need for the establishment and on-going functioning, maintenance and upgrading of the utilities. In addition, some utilities have specific locational needs which need to be accommodated for their operation. Co-location may reduce capital investment and also environmental effects.

It is appropriate to protect the operation of utilities from incompatible activities on adjacent sites. In some cases the community will need to balance its need

or the utility against likely environmental effects and the cost of mitigating measures.

To minimise the costs of providing services, development and redevelopment of areas which are already serviced and have capacity for additional development is encouraged. However, this must be balanced against other considerations, such as the type, character and density of living areas sought by the community and the style and density of development in the town centres. Where new areas of the District are to be developed, the economic costs of servicing an area are to be assessed including the demand on resources (e.g. the water resource). This will promote efficient use of services, sustainable management of resources and minimise costs to the community. Better utilisation of services within existing and new built up areas of activity is a factor encouraging a consolidation strategy for urban growth.

Encouraging the reduction of waste will have a number of beneficial effects. It will prolong the lifetime of facilities such as landfill sites and reduce the frequency with which new facilities are required. In addition, opportunities for recycling will reduce the need for new product and lessen the impact for, and demand on, both renewable and non-renewable resources.

The District's water resources are vulnerable in some areas because there are limits in terms of quantity and because it is susceptible to contamination. The effect on water quality and quantity will be a key element in assessing land use and development patterns and all new development will have to take into account the cost of providing water supplies.

The Council will encourage new technologies in the provision of utilities to ensure that both the resident and business communities can enjoy the advantages, provided any potential adverse effects, particularly in terms of the visual amenity and residential environment, are minor or properly mitigated.

Objective 3 - Environmental Impacts

Avoid, remedy or mitigate the adverse effects of utilities on the surrounding environments, particularly those in or on land of high landscape value.

Policies:

- 3.1 *To avoid, remedy or mitigate the adverse environmental effects created by the operation of utilities through the application of performance standards to separate incompatible activities, maintain visual amenity and the quality of the environment.*
- 3.2 *To make specific provision for certain utilities which are land extensive and/or which have specific locational needs, ensuring the type and scale of development avoids, remedies or mitigates adverse effects on the environment.*
- 3.3 *To require utilities, which have variable effects or which may have adverse effects if located in some localities, to obtain resource consents in order that the Council can consider the potential effects of the proposal and impose specific conditions if appropriate.*
- 3.4 *To protect areas identified as possessing important natural features or significant habitats of indigenous fauna from utilities which are visually and environmentally incompatible.*
- 3.5 *To encourage utility operators to adopt monitoring systems to ensure the effects of utilities and their operation is regularly evaluated to avoid or mitigate adverse effects, including the removal of unnecessary equipment (including buildings and masts).*
- 3.6 *To require the undergrounding of services in new areas of development where technically feasible.*
- 3.7 *To encourage the replacement of existing overhead services with underground reticulation or the upgrading of existing overhead services where technically feasible.*

3.8 *To ensure utilities are located in positions which retain visibility at intersections.*

3.9 *To take account of economic and operational needs in assessing the location and external appearance of utilities.*

3.10 *To protect the amenity, drainage and recreational value of lakes and rivers from the adverse impacts of incompatible activities.*

Explanation and Principal Reasons for Adoption

Utilities have a variety of impacts depending on their diverse nature. They include large facilities like the oxidation ponds at the Shotover River, and small-scale facilities such as the various forms of underground reticulation, towers, support structures, poles, wires and ancillary building structures. The impact of utilities is greater in areas used for residential, conservation or recreation purposes, or in areas of high landscape value. There is little justification for regulating utilities which do not have major impacts. Utilities have quite distinctive and varied characteristics. Large facilities are zoned with particular rules according to the scale of effects generated. Environmental effects are also balanced against operational requirements and costs.

Services such as power and telecommunications have traditionally been provided throughout the District by way of overhead servicing. The policy recognises overhead lines and structures associated with services can detract from visual amenity and whilst adverse effects of overhead lines and associated structures can be mitigated to a certain degree, for most properties in the Residential and Business Zones and in areas of high landscape significance, provision of new reticulation is required to be by way of underground reticulation. The higher cost of underground reticulation is recognised, and is not required in all rural areas where environmental and economic considerations may be differently balanced. The undergrounding of services for any new settlement development in the rural environment will be required in order to protect the rural character and visual amenity.

Some exceptions to undergrounding of services will exist, such as high voltage lines, as it is not practical to underground these in terms of cost. It also recognises the need for access for maintenance purposes.

The policy further recognises that for some areas of the District, currently supplied by overhead services and particularly the urban areas, visual amenity could be enhanced by the systematic replacement or upgrading of existing overhead services. Setting back poles and lamp standards from the kerb line may also be desirable for both amenity and safety reasons. In addition, a proliferation of infrastructure can be avoided by network utility operators negotiating the joint use of existing facilities and sites, sharing new infrastructure and the efficient removal of unnecessary equipment (including buildings and masts).

Communication facilities, including towers and dish antennae, can have a major visual impact depending on the scale and nature of the structures. Similarly, some utilities require larger ancillary buildings or structures, tanks, pumping stations, while others such as telecommunications have tended to become less conspicuous with changing technology.

For many structures or facilities where undergrounding is not an option, control over location and external appearance is emphasised, particularly in the more sensitive environments.

The location of utilities is often dictated by operational requirements which, if consumers expectations are to be met, must be distributed throughout the District and in particular the urban areas. Similarly, while alternative provision, for example underground and overhead reticulation of power, is technically possible, the costs to the provider and consumer could be prohibitive.

Facilities such as cellular telecommunications need to be located throughout the District to serve residential as well as commercial users. The provision of high voltage power distribution may also be unavoidable in built up areas in some cases. Accordingly, the Plan does not preclude such facilities, but will require account to be taken of location and design to mitigate rather than avoid adverse effects.

There are a number of larger scale utilities within the District and to protect the adjoining activities and the ongoing operation of the utilities various degrees of control will be implemented, particularly when these utilities seek to re-establish in or near more sensitive rural or residential environments.

The utility function of lakes and rivers has been dominant in management terms, with piping or canal treatment frequently used particularly in urban areas. Such an approach can lessen the ability of these lakes and rivers to enhance amenities, destroy the ecological values of waterbodies, be costly to maintain, and reduce the ability to manage peak discharges. For this reason, the Plan promotes a balanced strategy of maintaining open lakes and rivers for both flood management and environmental reasons. This is supported by controls on the siting of buildings and filling activities along lakes and rivers, as well as public ownership and management where appropriate.

Implementation Methods

Objectives 1, 2 and 3 and associated policies will be implemented through a number of methods including:

(i) District Plan

- (a) The provision of zones, designations and rules.

(ii) Other Methods

- (a) Through the Annual Plan process to direct funds and resources towards providing services in specific areas.

17.1.4 Environmental Results Anticipated

- (i) Maintenance of the amenity values of the District, particularly in residential, town centre, business, and open space areas.
- (ii) Provision of utilities consistent with the nature of the local environment, operational needs, and the cost and scale of facilities.
- (iii) The safe and efficient operation of utilities.

- (iv) Enhanced functional and environmental management of lakes and rivers.
- (v) New development in areas where utilities can supply services on a sustainable basis.
- (vi) Maintenance of high quality and availability of groundwater supplies.
- (vii) Continued opportunity for improved technologies.
- (viii) Development of areas more able to be serviced with consequent economies in use and provision.
- (ix) Further sewer and water reticulation in rural areas where this is necessary to prevent degradation of groundwater resources.
- (x) Protection of the surrounding environment from the disposal of solid wastes, sewage and stormwater.
- (xi) Maintained and enhanced public health.