

## Topics

### T10 Subdivision

Subdivision refers to the legal process of changing the location of existing property boundaries in order to make new allotments, or to realign the boundaries of existing allotments. Subdivision is most often the first significant step in the development process.

The role of Council's in subdivision includes being the regulatory authority in the processing subdivision consents under the Resource Management Act, as guided by the District Plan. Subdivision is not an 'as of right' activity, so all subdivision must go through the consent process. In most instances, the technical and legal nature of the process requires subdivision professionals to make an application to Council on a person's behalf.

Council may place conditions on consent that may the provision of easements, the creation of accessways, avoidance of hazards, financial/development contributions, the connection to, or provision of, infrastructure, and other matters which relates to the actual or potential effects of subdivision. As such, the subdivision process goes hand in hand with the development of public reticulated infrastructure, network utilities, and roads.

Subdivision, as a significant part in the development of infrastructure, can leave a lasting legacy on the way Wanganui looks and feels. For example, the basic roading layout in the central city is much the same as with was before 1900. Therefore, great care is needed to ensure that the development of subdivision and infrastructure not only works now, but also well into the future. Infrastructure needs to align with the anticipated and future land uses of Wanganui.

After granting subdivision consent, Council also manages two other subdivision processes. The first is the approval of the survey plan. This is a process that ensures that the draft plan approved by Council at the subdivision consent stage reflects what has been surveyed and will become the official Plan lodged with the Department of Land Registrar.

The final process is referred to as the Certificate of completion. This process is to certify that any and all conditions placed on the subdivision consent by Council has been fulfilled and any and all contributions have been paid. Where any conditions are not complete an applicant can ask to bond these conditions where appropriate. Where conditions are relevant to the on-going use of the new allotment after the new title is issued, Council may impose a Consent Notice. This is a note permanently attached to the title to ensure a matter is addressed after the subdivision is certified complete.

As well as the regulatory authority, Council has a separate role as an infrastructure manager. This role is distinct and means Council, as manager, can specify particular requirements for the development of servicing infrastructure in terms of level of service, design, construction and other matters, in particular as servicing infrastructure is most often vested in Council, or will connect to existing Council infrastructure.

## **T11 Low Impact and Urban Design**

Conventional approaches to subdivision and development have tended to work against nature in order to make the land work for a development proposal. More recent approaches to development have been 'softer', and increasingly include the integration of urban design principles.

Urban design is the name of the process that designs and promotes 'livable' and people focused urban spaces. It is a multidisciplinary approach to getting the best quality sustainable mix of natural processes, structures, social interaction, connectedness, and people. Urban design is often referred to as 'place making'.

The Wanganui District Council is a signatory to the New Zealand Urban Design Protocol, a document prepared by a number of agencies to promote the integration of urban design into New Zealand Cities. Council is therefore committed to promoting good urban design outcomes.

The Protocol outlines the 7 C's of good urban design:

Context: Demonstrating an understanding that subdivision, buildings, land uses, movement corridors, the natural environment and processes, and

public places and spaces occur within site specific and broader Wanganui settings.

Character: Reflecting, enhancing and protecting the distinctive natural and physical qualities within the local and broader context of Wanganui in the development proposal. This includes significant cultural and visual landscape features, the surrounding built environment, and historic heritage.

Connections: Enhancing connectivity within multi-modal transportation networks and the links between the different transport modes (pedestrian, cycleway, street) to ensure safe and easy movement for people and the integration of the subdivision with existing and future surrounding neighbourhoods through these networks.

Custodianship: Design that is environmentally and economically safe and accessible. Spaces that are protected as places of value by the community.

Collaboration: Designs that acknowledge the contribution of different disciplines and perspectives, communicating and sharing knowledge for the integration of landuse, structures and networks. This includes the wider and affected communities.

CPTED: Crime Prevention Through Environmental Design.

Urban design processes are increasingly being recognised as good planning practice in creating liveable environments and is increasingly being implemented through statutory and non-statutory documents. Existing Council policy such as the Wanganui Urban Transport Strategy already incorporates some of the ideas and philosophies of the Protocol.

The promotion of liveable cities and streets, the management of stormwater using natural overland flows, swales, rain gardens, suitable design proportions, integrating infrastructure with land use, and retaining existing features and topography has become more mainstream. These approaches need not be a more expensive option, but do provide for an increase in the quality of the urban environment.

## **T12 Earthworks**

Earthworks are a fundamental part of the development process. The act of earthworks can include the modification of land surfaces by blading, contouring, ripping, moving, removing, placing or replacing soil or earth, or by excavation, or by cutting or filling operations, including the importation of fill.

There are many reasons why people carry out earthworks. In most instances, earthworks are generally always required for the construction of buildings or other structures. Smaller scale earthworks may pass without notice, where as some larger or poorly thought through works can create a nuisance or create a significant hazard.

Conventional subdivision development can require the removal of topographical features for the development of level sites and the development of infrastructure, often modifying the natural flows of water through or from a site or sites. This can involve a large surface area and has the potential to create significant adverse effects.

More recent approaches to earthworks and subdivision development have been lower impact and choose to work with the contours of the land rather than altering it to fit for development.

Wanganui has a mix of soils and topography. This means there is a range of complex issues around stability, drainage, property and nuisance factors. Not all soils behave the same way and can require different management.

Poorly managed earthworks can result in noise effects on adjoining properties, along with the deposition of dust. However, while these create a nuisance, works that deposit silt into infrastructure, damage culturally significant items or areas, create erosion or create instability can have disastrous consequences. Therefore, key measures to manage earthworks are prudent.

## **T8 Infrastructure Services Development**

The term infrastructure and network utility services is applied to a range of structures, buildings, reticulation lines (eg, telecommunications) or spaces (eg, reserves) located on, in or over land or water.

Infrastructure and network utility services support land use activities, including subdivision, and contribute to the health, safety, socio-economic wellbeing and quality of life of people and communities. They also protect the environment from pollution by providing for the collection, treatment and disposal of discharges or waste material generated by land use activities.

Infrastructure services are regarded as physical resources. They have physical capacity limits and require on-going maintenance. The safe and efficient operation of the facilities, particularly the roading network, can be adversely affected by land use activities. Though facilities are “renewable”, they are costly to provide. Infrastructure services also use up land.

~~Utilities~~ Reticulated infrastructure services are an essential part of a District’s infrastructure and their upkeep and extension is necessary for the functioning of the District and for the safety, health and well-being of its residents. ~~Utilities~~ These include water systems, irrigation systems, sewerage and trade waste systems, stormwater drainage systems, ~~telecommunication networks, electricity and natural gas reticulation networks.~~

Historically most network utility services were provided either by the central government, local or supply authorities and the services were generally known as ‘public utilities’, reflecting their ownership by the public for the public good. These include telecommunication and electricity networks, and natural gas reticulation.

Though many network utility operators are now private companies seeking to make a profit from service provision, special recognition for network utilities is made in the District Plan because they provide an important function in terms of the viability of the District as a place for people to live and work. It is recognised in the Plan that although these network utility

operations, improvements and maintenance can have adverse effects on the environment, the special characteristics of undertaking an activity on the basis of a network (of sites, pipes, lines etc) requires special provisions in the Plan to manage the effects.

Under the Resource Management Act, the Council is required to manage the effects of the use and development of ~~utility networks~~ and network utility on the environment as it would for any other structures. Given the essential role public utilities perform, it is recognised that utility operators require certainty as to those works which can proceed without consent application and those which do require consent. ~~The District Plan provisions can generally perform an enabling role where a large range of works are permitted, subject to conditions and terms.~~

The development of infrastructure services ~~needs to~~ should be:

- a. Co-ordinated with the planning and development of land use activities to ensure timely, adequate, affordable and cost-effective provision.
- b. Managed to ensure safe and efficient operation.
- c. Managed to avoid, remedy or mitigate any adverse effects on people, communities and the natural environment.

## Issues

### ~~I19 — Maintain Existing Infrastructure — Maintaining the Existing Infrastructure System~~

~~Much of the existing infrastructure in the District is aging. There is particular concern about underground assets. There are also capacity limitations.~~

~~Regular maintenance, replacement and upgrading will be required to improve the level of service to existing development, allow further in-fill development and address pollution problems caused by the inadequacies of the existing system.~~

~~In some cases, it may be necessary to rationalise existing provisions. For example, some recreation and open space facilities are not suitably located according to need, resulting in some areas with under-utilised resources, and other areas with limited or inadequate resources.~~

~~In maintaining an efficient infrastructure system, the following concerns need to be addressed:~~

~~a. Timing — regular maintenance defers costly expenditure on replacement facilities, and timely replacement avoids breakdowns of services, causing inconvenience, or pollution problems.~~

~~b. Costs — budget provisions need to be made to enable the implementation of a long term maintenance programme.~~

### ~~I20 — New Infrastructure Services — Meeting the Demand for New Infrastructure Services~~

~~1. In addition to maintaining the existing infrastructure system, a number of new capital projects need to be implemented in the future to meet development needs. These include:~~

~~a. Improvements to the quality and quantity of water supply.~~

~~b. Provision of collection, disposal and treatment of waste water, including a separated stormwater reticulation system.~~

- ~~c. Solid waste disposal facilities which meet environmental standards.~~
  - ~~d. Improvements and extensions to the urban roading network to support a number of new developments.~~
  - ~~e. Improvements and extensions to the roading network, and other local facilities to service rural development.~~
  - ~~f. Improvements and extensions to utility networks to support new developments.~~
- ~~2. The separated stormwater reticulation system needs to be connected to individual properties. Funding arrangements between Council and private property owners have yet to be established for the implementation of this work.~~

~~In considering the demand for infrastructure, the following concerns need to be addressed:~~

- ~~a. Timing – provision of facilities will be co-ordinated with development to avoid premature expenditure or environmental problems caused by inadequate facilities.~~
- ~~b. Cost – it will be necessary to ensure cost-effective and efficient infrastructure development, and establish an equitable system of financial contribution.~~
- ~~c. Land requirement – it will be necessary to identify and justify the land requirement for publicly funded infrastructure services.~~
- ~~d. Responsibility – it will be necessary to clearly establish the relative responsibilities of Council, other agencies and the private developer in infrastructure development, and the circumstances under which the developer is responsible for upgrading or extending the existing services to cater for the new development.~~



~~e. Performance Standards - it will be necessary to clearly establish an adequate and appropriate level of provision to service urban and rural development.~~

**I21 Maintaining a Safe and Efficient Transportation and Utility Network Conflict with network and reticulated infrastructure.**

Infrastructure facilities have specific locational and operational requirements. Incompatible subdivision and land use activities can reduce the efficiency or impose constraints on the operation, maintenance, upgrading and development of these facilities. These effects can, in turn, adversely affect community health and safety.

1. Some infrastructure facilities, especially the roading network, airport electricity transmission<sup>1</sup> and telecommunications facilities, have specific locational and operational requirements. Land use activities, including building development, can reduce the efficiency or impose constraints on the operations of these facilities. These effects can, in turn, adversely affect the safety and convenience of people and communities.

The roading network is the main form of transport in the District. It provides access for the movement of people and goods and a corridor for infrastructure services.

~~Changes in land use activities can affect the operational safety and efficiency of the roading network. In this respect, the location and design of property accesses (having regard to the size and function of the road) is an important consideration to avoid cumulative adverse effects on safety and efficiency of roading networks. These matters are~~

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<sup>1</sup> S2

~~considered under Council By-law and are therefore not controlled through the District Plan.~~ Major areas of change in the District include:

a. ~~Increased forestry, but mainly associated with logging activities – the heavy load and highly concentrated seasonal nature of activities put pressure on the rural roading network, and the problems are compounded by the rugged terrain and sensitive environment with areas of high natural values and land.~~

b. ~~Instability in much of the hill country where the majority of forestry activities are located.~~

c. ~~Increased rural residential development resulting in higher traffic volumes on the internal roading network and gaining access onto State Highway 3.~~

d. ~~Urban expansion – new developments in the Otamatea area will put pressure on State Highway 3 and the internal roading network.~~

e. ~~Infill and redevelopment within the existing urban area – intensification of activities or land use changes increase traffic volumes and patterns and demands for parking, loading and unloading.~~

2. ~~In considering the safety and efficiency of the roading network, the following concerns need to be addressed:~~

a. ~~Responsibility – it is necessary to clearly establish the circumstances under which the developer is responsible for upgrading or extending the existing roading network to cater for the new development.~~

b. ~~Costs – it is necessary to clearly establish a system for financial contributions by the developer towards the costs of the extension and upgrading of the roading network to cater for the new development.~~

c. ~~Performance standards – it will be necessary to establish performance standards for urban and rural roads in the district, against which the impacts of developments and land use activities may be assessed.~~

~~The airport operations require an unobstructed flight path and approach area for landing and take-off. The flight path and approach area will need~~

~~to be identified and the location and height of structures within the identified areas controlled to ensure the safe and efficient operation of air traffic.~~

~~The Wanganui airport is of strategic importance to the District and it needs to be recognised that aircraft noise is an inherent and unavoidable aspect of airport operations. This issue should be considered in the location of noise-sensitive activities in the locality of the airport.~~

~~Telecommunications facilities often have specific locational requirements, eg navigational aids. Their operation relies on unobstructed visual corridors or air waves. The location and height of buildings within the transmission corridor needs to be controlled to avoid interference with telecommunication services and the accurate and efficient transmission of signals.~~

## **I22 ~~Managing the Environmental Impact~~ Effects of Infrastructure Development**

Infrastructure facilities and network utility facilities are usually structures located on or over land. They create a visual and physical impact on the surrounding area.

Even where facilities are located underground, eg reticulation for water supply or drainage or telecommunication lines, their development still requires excavations and modification to the landform.

Examples of environmental concern associated with infrastructure development include:

- a. Earthworks and construction in areas of land instability.
- b. Damage to or loss of natural habitats, indigenous vegetation and significant landscape features.
- c. Visual impact of overhead lines and structures.
- d. Physical impact on private properties and communities.
- e. Disturbance of and damage to waahi tapu or other sites of cultural significance to Iwi.

f. Stormwater and run-off from site development may create adverse effects on water quality in waterbodies.

g. The health and safety of the community in which they serve and locate.

In addition, activities associated with the infrastructure facility can generate noise, dust, smell or high volumes of traffic to a level which adversely affect the amenity of adjacent areas.

~~The location and design of infrastructure facilities will be managed to avoid, remedy or mitigate damage to, or loss of, natural, cultural and amenity values of the land, people and communities.~~

Gh.The impact on the landscape or the coastal environment from stormwater disposal in the Coastal Residential Zone.

In most cases, the route and site selection method will provide the best opportunity to reduce the environmental effects of linear infrastructure networks such as the national grid.<sup>2</sup>

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<sup>2</sup> S2

## **I47 Infrastructure Capacity**

There is a lack of detailed information about the nature and performance of reticulated infrastructure within the urban areas of Wanganui. Some areas are believed to serviced by reticulated infrastructure that is at, or nearing, capacity. Therefore, this infrastructure may not be able to absorb further subdivision development or retain a suitable level of service, creating uncertainty.

## **I48 Sustainable site design**

New and redeveloped sites with insufficient drainage, or designed with poor solar access, inappropriate site orientation, and a lack of consideration of the benefits of energy efficiency are less sustainable.

## **I49 Low impact urban design**

While conventional solutions for the supply of services are effective in some circumstances, a lack of consideration of alternative approaches often limits the potential to achieve sustainable low impact design. These approaches can work with the existing natural processes and landforms, maximising environmental benefits, increase liveability and has the potential to reduce the cost of developing infrastructure.

## **I50 Poorly managed earthworks**

Poorly managed earthworks and land modification can create a range of adverse effects on amenity values and the physical environment. These include dust, noise, damage to infrastructure and private property, the alteration natural and modified water flow paths and can also adversely impact on cultural values.

## **I51 Development works**

The development process through impacts on land modification, building location, scale, height or even presence alone, may adversely affect Maori values for that place.

## **I52 Maori Values**

Maori values and information are not always well understood or respected in resource management processes.

## **I55 Compatibility with network utilities**

Network utilities contribute to the health, safety and wellbeing of the community. However, this can be compromised by development that is not compatible with their operational requirements.

**Issue IX1 Archaeological and historic Heritage and Development**

Archaeological sites and other historic heritage items and values can be at risk from the effects or works arising from subdivision,<sup>3</sup> earthworks, and infrastructure development.<sup>4</sup>

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<sup>3</sup> S14 Page 5 Tabled

<sup>4</sup> S14 and FS2

# **Objectives**

## **Infrastructure Development**

- O17 Infrastructure Development Which is Co-ordinated, Effective and Efficient in the Use of Natural and Physical Resources to Meet the Present and Foreseeable Future Needs of the District**

~~The provision of infrastructure facilities will be timely, affordable and at an appropriate level to service rural and urban development.~~

~~Existing facilities will be well maintained to sustain long term use. Infrastructure development will also be efficient in the use of land.~~

## **Sustainable subdivision and Infrastructure**

- O40 Sustainable subdivision and infrastructure development in the Residential areas of Wanganui that:**

- a. Appropriately integrates infrastructure with land uses;
- b. Provides a safe, healthy and livable residential environment;
- c. Connects infrastructure and communities together;
- d. Is resource and energy efficient;
- e. Has low environmental impact and integrates the natural environment;
- f. Avoids, minimises or mitigates<sup>5</sup> adverse effects on historic heritage including archaeological sites.<sup>6</sup>

## **Urban Design, Subdivision and Infrastructure**

- O41 Subdivision and infrastructure development that demonstrates the following qualities of good urban design defined in the New Zealand Urban Design Protocol:**

- a) Context
- b) Character
- c) Choice
- d) Connections
- e) Creativity
- f) Collaboration
- g) Crime Prevention Through Environmental Design (CPTED)

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<sup>5</sup> S14 Page 5 – Tabled

<sup>6</sup> S14 and FS2

### Subdivision qualities

#### O42 Subdivision and<sup>7</sup> infrastructure development that:

- a. Performs its function effectively,
- b. Is flexible in design,
- c. Provides resilience to natural hazards,
- d. Is durable over its lifespan.
- e. Provides capacity in reticulated services for the intended future land uses in the catchment;
- f. Provides for ongoing maintenance;
- g. Achieves lifecycle costs that are affordable to the community;
- h. Takes into account the risk<sup>8</sup> of climate change.

### Subdivision and Network Utilities

#### O43 Subdivision and development in Wanganui that does not compromise the effective operation, maintenance, upgrading and development of existing network utilities.

#### **O4 Recognition of Maori Culture and Traditions**

~~Traditional practices and beliefs in resource management are to be recognised in the resource management framework for the District. To achieve this requires ongoing consultation with *hapu*\* and *Iwi*\* groups. Protection of sensitive information, and finding methods to achieve this, is a significant issue. are recognised and valued.~~

#### O44 Development and Maori values

Development that avoids or mitigates adverse effects on the cultural values of items and places of significance to Maori.

#### O45 Quality earthworks development

Earthworks and land modification in Wanganui that ~~maintains or enhances~~.<sup>9</sup>

1. Maintains or enhances.<sup>10</sup>

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<sup>7</sup> S2

<sup>8</sup> S2

<sup>9</sup> S14 and FS2

<sup>10</sup> S14 and FF2



- a. Amenity values
- b. Landforms and natural processes
- c. The efficiency and effectiveness of infrastructure
- d. The safety of people and property
- e. The stability of soils

AND

- 2. Has appropriate regard to cultural heritage sites and values.<sup>11</sup>

### **OX1 Recognising the importance of the Electricity Transmission Network**

#### **1 To recognise the importance of the national grid to the local, regional, and national social and economic well-being , including by:**

- a. Providing for the sustainable, secure and efficient use and development of the electricity transmission network.
- b. Minimising risks to safety; and
- c. Preventing sensitive activities and manage the expansion of existing such activities, from locating within a transmission corridor where they would affect or be affected by the transmission line.<sup>12</sup>

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<sup>11</sup> S14 and FS2

<sup>12</sup> S2 – Appendix E - Tabled

# Policies

- P1 Promote a pattern of urban development that is ~~cost-effective, compact and efficient~~ in the use of land and infrastructure services, and ~~co-ordinated with a long term programme of infrastructure development.~~**

~~Urban development is an on-going process of intensification and change within the existing urban area, and expansion into new areas. It uses up land and requires the timely provision of infrastructure facilities\* to support land use activities.~~

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~~This policy recognises that urban development and infrastructure development should be co-ordinated. It also recognises that some areas are easier and cheaper to service than others.~~

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~~Implementation of this policy relies on Council\* undertaking long term comprehensive planning to assess future development needs and the most cost-effective options for urban expansion.~~

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~~This approach is considered appropriate as it provides input to Council's\* asset management and financial planning. It also provides certainty and a framework to guide private development.~~

- P2 ~~New Development within the Urban Boundary~~**

~~Encourage Require new urban subdivision and development to locate in areas within the urban boundary and where there is available infrastructure capacity or where upgrades or extensions to services have been planned or programmed~~

~~Greenfield development is often an easier development option than infill development or redevelopment, but it may not be the most cost-effective and efficient in the use of land and *infrastructure facilities\**.~~

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~~This policy aims to optimise the use of existing land and *infrastructure facilities\** for urban development before opening up new areas for urban development.~~

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~~*Council\** is required to indicate the planned level of infrastructure service and timing of provision in different parts of the urban area. This approach forms part of *Council's\** long term asset management and financial planning. It also provides certainty and a framework to guide private development.~~

~~This approach is considered appropriate to promote a cost-effective and efficient pattern of urban development.~~

~~\*refer to definitions~~

**P74 Optimise the use of existing infrastructure and ensure the provision of additional infrastructure is timely, logical, affordable and cost-effective**

Promote the optimal use of existing reticulated infrastructure by identifying and supporting<sup>13</sup> areas of increased density where is<sup>14</sup>

- a. Infill and higher density development<sup>15</sup> does not compromise environmental quality and amenity values; AND<sup>16</sup> prior to developing extended or new infrastructure.<sup>17</sup>
- b. Suitable levels of service can be achieved.<sup>18</sup>

~~This policy focuses on the maintenance, upgrade and extension of the existing infrastructure systems provided by the Council and other network utility operators. Existing facilities are a major physical resource of the District. While they can be renewed and extended, they are costly to provide. Therefore, it is necessary to make the best use of existing facilities to meet present and future needs. This Plan makes provision for the continued operation, maintenance and upgrading of existing utilities.~~

~~Infrastructure development requires a long lead time. Planning for infrastructure development will look at and provide for long term needs.~~

~~This policy relies on Council adopting a strategic approach to infrastructure development. This is considered appropriate and effective, given Council's responsibilities in asset management under the Local Government Act 1974. The preparation of long term infrastructure development plans provide certainty to developers about the timing and level of availability of infrastructure services. They also provide Council with a work programme and framework for financial planning.~~

~~The implementation approach also relies on District Plan rules and conditions and terms to set out responsibilities for developers. This is essentially a user-pays approach. Also, the use of incentives, in the form of reduced charges or provision of services, and requirements for financial contributions from~~

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<sup>13</sup> S27

<sup>14</sup> S27

developers, is to influence development to locate where there is spare infrastructure capacity.

Future public works will be provided for either by way of designations (through notice of requirement procedure) and identification on the District Plan maps, or by way of District Plan rules.

These approaches are considered appropriate to achieve efficient, affordable and cost-effective infrastructure development.

### ~~P75 Infrastructure for Development~~

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~~Ensure the provision of infrastructure services is adequate and appropriate to the level of development and the needs of the respective areas~~

Currently, there are different levels of infrastructure service available in different parts of the District. It is not efficient, affordable or cost-effective to provide the same level of service throughout the District.

This policy is aimed at rationalising the level of infrastructure service provision. The level of service will relate to the nature and scale of activities, and, in some cases, to the particular local circumstances.

The policy also sets out the respective responsibilities of Council and developers. It requires Council to indicate the planned level of infrastructure service and timing of provision in different parts of the District. Appropriate District Plan rules covering conditions and terms for infrastructure provision by the developer will be established.

This implementation approach is considered appropriate and efficient. It provides input to Council's asset management planning and a framework for financial planning. It provides certainty to developers by signalling what provisions are available, and when, and what contributions are required of them under different circumstances.

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<sup>15</sup> S27

<sup>16</sup> S27

<sup>17</sup> S27

<sup>18</sup> S27

## **P76 Infrastructure for New Subdivisions.**

~~Ensure on-site infrastructure facilities, and an appropriate portion of the portion of the<sup>19</sup> cost of providing upgrades or extensions to district Council owned<sup>20</sup> infrastructure facilities to serve new subdivisions, building developments or other land use activities, relating to growth<sup>21</sup> are paid for by the developer.~~

~~There are two types of infrastructure services: on-site local services like internal roads, site drainage and connections to reticulated mains water supply, sewerage and drainage (or provision of appropriate alternatives if a reticulated system is not available); and trunk or district services like the roading network, water supply and, liquid and solid waste disposal systems.~~

~~On-site services are provided and paid for by the developer. Where upgrades or extensions to existing District infrastructure facilities are necessitated by a proposed development, then an appropriate portion of the cost of the District upgrade or extension is to be paid for by the developer.~~

~~There may be circumstances where the proportion of contribution by the developer may be reduced, eg if a higher standard of provision is required to serve a catchment area wider than the proposed development, or if higher environmental standards are required to protect outstanding landscape features or significant natural values.~~

~~District Plan rules set out the circumstances and amounts of contribution by the developer. This provides a clear, consistent and equitable system of user-pays contribution to infrastructure development in the District.~~

## **~~P77 Encourage an efficient use of land for infrastructure development~~**

~~Infrastructure development uses up significant areas of land. Opportunities for minimising the land take by infrastructure development need to be explored. These could be through co-location of facilities or project design. Rationalisation of the use of sites no longer required for their original use is another possibility.~~

~~It is not possible to set standards for design to minimise land take for new projects. Implementation of this policy therefore relies on negotiations with~~

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<sup>19</sup> S26 and FS1

<sup>20</sup> S26 and FS1

<sup>21</sup> S26 and FS1

~~developers, relevant authorities, utility companies and agencies with responsibilities for infrastructure development.~~

~~**P79 Manage roads in the District, consistent with their transportation functions, according to the following criteria:**~~

~~**1. National routes**~~

~~National Routes are motorways and principal state highways:~~

- ~~a. which form part of a network of national strategic importance;~~
- ~~b. which are a significant element in the national economy;~~
- ~~c. for which a high level of user service must be provided;~~
- ~~d. which have the highest degree of access control and, where required, standards for access.~~

~~**2. Primary arterials**~~

~~Primary (regional) arterials are roads which:~~

- ~~a. serve as links of strategic importance between regions or within regions and between districts;~~
- ~~b. are a significant element in the regional economy;~~
- ~~c. have access standards for permitted activities determined principally on the basis of strategic function and traffic volumes.~~

~~**3. Roads included in this category are:**~~

- ~~a. state highways not included in the National Routes category;~~
- ~~b. roads giving access to important tourist areas or significant areas of population;~~
- ~~c. roads linking different transport modes;~~

- ~~— d. roads providing significant intra-urban links;~~
- ~~— e. all other roads of regional or inter-regional importance.~~

#### ~~4. Secondary arterials~~

~~Secondary (district) arterials are roads forming links between residential, commercial, industrial or recreational land use activities and which :~~

- ~~— a. serve as links of strategic district importance within or between districts, and in particular provide 'commuter' routes for car traffic from the suburbs to the town centre;~~
- ~~— b. are a significant element in the local economy;~~
- ~~— c. often also serve as local roads.~~

~~Access standards are determined following careful consideration of:~~

- ~~— a. form (the physical alignment of the road);~~
- ~~— b. function (the present and future role of the road);~~
- ~~— c. traffic volume criteria.~~

#### ~~5. Collector routes~~

~~Collector routes are roads which:~~

- ~~— a. are locally preferred routes between or within areas of population or activity;~~
- ~~— b. complement district arterials but have property access as a higher priority;~~
- ~~— c. are usually paved and have standards including access standards, suitable to the safety requirements of the traffic volume on each section.~~

#### ~~6. Local roads~~

~~Local roads are all other roads whose primary function is property access and with standards including access standards appropriate for the traffic use. use of the road by occupants of the sites adjoining the road reserve.~~

~~This policy requires the adoption of a hierarchy for the roading network which is a major physical resource in the District. The use of a roading hierarchy is a well-established method to promote the safety and efficiency of the roading network. The hierarchy classifies roads based on their purpose (their relative through movement and property access functions) and the nature and volume of traffic that they can carry in a safe and efficient manner.~~

~~It also provides a framework to guide future development in the District as the hierarchy contains road designations and indicative roading patterns. These encourage strategic linkages which ensure the road network is not being compromised and/or future development is not stifled by lack of access. Indicative roads signify council's intentions with regards to the future function of the road and also which parcels of land should be able to gain access.~~

~~The intention is to promote safety, efficiency and linkage while ensuring that the final layout of the road is flexible and financial responsibility remains with the developer.~~

**P80 Protect reticulated and network utility infrastructure<sup>22</sup>  
Protect reticulated and network utility infrastructure resources in the District from the adverse effects of from inappropriate other land use and subdivision activities development which compromises their effectiveness operation, maintenance and upgrading.<sup>23</sup>**

~~Land use activities can interfere with, or constrain, the operation of infrastructure resources such as transportation and telecommunications networks.~~

~~For example, land use activities generate pedestrian and vehicular traffic which may exceed the carrying capacity (volume and axle weight) of the roading network. The location and height of structures can obstruct the operation of the airport and telecommunications facilities.~~

~~Activities which are sensitive to noise are generally not suitable in close proximity to the airport, unless adequate mitigation measures can be~~

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<sup>22</sup> S27

<sup>23</sup> S2 and S13



implemented.

~~This policy\* mainly relies on District Plan rules to set out the circumstances and conditions and terms for controlling land use activities, including building\* development\*. Operational requirements, especially safety standards, of essential services like the transportation and telecommunications network~~

**P81**

**Provide for network utilities**

**Provide for the establishment, maintenance and repair of network utilities to meet the needs of the community, including at a local, regional and national scale,<sup>24</sup> in a manner that enables adverse environmental effects to be avoided, remedied or mitigated, including effects on natural, cultural and amenity values**

~~This policy recognises that the efficient and practical operation of network utilities is in the interests of community well-being, health and safety. It is recognised that infrastructure facilities require regular maintenance and occasional repairs to ensure safe and efficient operation. This policy also recognises that some larger scale network utilities have the potential to have significant environmental effects and, while they cannot always be avoided, remedied or mitigated, it is important that the Plan enable these to be considered against operational requirements and the circumstances of the site concerned.~~

~~Network utilities are a vital element of a functional District. Infrastructure associated with network utilities, where not appropriately designed or located can have the potential to have an adverse visual effect.~~

~~————— The effects of infrastructure development will be managed to avoid, remedy or mitigate damage to, or loss of, identified environmental values. These values include outstanding landscape features, the natural character of the coastal environment, wetlands, lakes and rivers and their margins, areas of significant indigenous vegetation and natural habitats, and sites and areas of significance to Iwi.~~

~~————— This policy provides a clear statement of what values are significant and require protection. Conditions and terms are used in this plan to manage the environmental effects of infrastructure development. In relation to utilities which are discretionary activities, it will be necessary to consider the extent to which environmental effects can be avoided, remedied or mitigated.~~

~~————— While provision is made for a range of utilities, any adverse effects of those activities are dealt with. The policies give specific direction with regard to the~~

<sup>24</sup> S2

~~need to deal with utilities such as lines, the visual impact of which can be avoided by underground reticulation.~~

### ~~**P82 Infrastructure for new subdivision development**~~

~~Ensure that key infrastructures are accommodated for new subdivision and development~~

~~Minimum standards of water supply, sewage reticulation or disposal, stormwater disposal, and network utilities are important to maintain the amenity requirements and expectation of the community. These standards include street furniture (footpaths, landscaping) that promote the use of the roading network as a public space. Without minimum standards health problems and fragmented services may result.~~

### ~~**P83 Use of the Road Corridor**~~

~~Enable the use of the road corridor for a variety of purposes, while protecting its transportation function and managing conflicts.~~

~~The primary functions of road corridors are to provide access to properties and to enable the movement of people and goods. However the corridors are also used for a number of other activities. When assessing the appropriateness of District Plan management of the corridors, it is important that these other activities are considered.~~

~~Most of Wanganui District's utility service infrastructure (which includes telecommunication lines and cables, water supply and wastewater pipes, and electricity and gas lines) are located within the road corridors. These services are constructed, maintained, upgraded and replaced from time to time.~~

~~Other activities occurring in road corridors include:~~

- ~~▪ pedestrian and cyclist facilities (including formal and informal walkways and cycle ways) and associated street furniture~~
- ~~▪ property accesses~~
- ~~▪ amenity (or beautification) planting of gardens and trees~~
- ~~▪ lighting for pedestrian and property security~~
- ~~▪ parking~~
- ~~▪ "Mainstreet" type programmes especially in commercial centres~~
- ~~▪ signposting~~
- ~~▪ open space areas used for activities such as vehicle stopping, picnicking, selling produce and grazing stock.~~

~~In built-up areas shop verandas also encroach into (or more accurately over) the road corridor.~~

~~It is appropriate that these activities continue to occur within the road corridor. However the effects of these activities require some management to ensure~~

~~conflicts with the primary function of the corridor and with each other are avoided managed.~~

**P121 Appropriate Residential zone development**

Require new subdivision and development of residential scale, intensity, and character to locate within the Residential Zone.

**P122 Residential levels of service**

Require new residential subdivision and development to locate in areas where there is a suitable level of service from reticulated infrastructure available.

**P123 Allocated infrastructure**

Avoid subdivision and land use development that utilises infrastructure capacity allocated for other identified areas or uses.

**P124 Reduction in residential allotment size**

Provide for a reduction in minimum residential<sup>25</sup> allotment size in the Residential Zone<sup>26</sup> where the entire infrastructure catchment can support both:

- a. The level of service required by the proposed development, AND;
- b. The proposal will not reduce the ability of the catchment to provide for development in any other location for which it is intended to service.

**P125 Quality in-fill development**

**Promote infill subdivision and development that:**

- a. Complements the character of the area in which it is located
- b. Is located in an area that has capacity for reticulated services
- c. Provides on-site amenity
- d. Enables continued solar access.

**P126 Rural B Zone connections**

Avoid connections to, and extensions of, the reticulated infrastructure network in the Rural B Zone.

**P127 Provide adequate information**

Ensure adequate information is provided prior to the granting of subdivision or land use consent to demonstrate that there is provision for additional

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<sup>25</sup> S27

<sup>26</sup> S27

connections to reticulated infrastructure and network utilities to all allotments to a suitable standard.

**P128 Infrastructure qualities**

**Require Infrastructure to be designed, constructed, and able to be maintained in a manner that is:**

- a. Effective and efficient in meeting its functional purpose.<sup>27</sup>
- b. Able to be maintained in an effective,<sup>28</sup> efficient manner.
- c. Cost effective and affordable.
- d. Durable.
- e. Integrated with other infrastructure and land uses.
- f. Responsive to local conditions.
- g. Compatible with network utilities and other reticulated infrastructure.
- h. Designed and constructed taking into account the effects of climate change.
- i. Resilient to natural hazards.

**P129 Reticulated catchment requirements**

**Require the design of new reticulated water, wastewater and stormwater infrastructure to take into account:**

- a) The relevant upstream and downstream capacity and restrictions in the servicing catchment when land in the catchment is fully developed to a level anticipated by the District Plan.
- b) The future anticipated servicing demand of the proposed development when completed.

**P130 Connectivity of reticulated services**

Require connectivity and compatibility between existing and new reticulated infrastructure.

**P132 Appropriate level of infrastructure**

Require all new residential subdivision to connect to an appropriate level of infrastructure and network utilities prior to the issue of a certificate pursuant to Section 224 of the Resource Management Act 1991.

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<sup>27</sup> S27

<sup>28</sup> S27

**P133 Integrated streets**

Promote street design streets that integrate transport functions with adjoining lands uses in a manner that is appropriate for surrounding environment.

**P134 Liveable streets**

Encourage the development of liveable streets that contribute to a sense of place, safety and positive community interaction by enabling use of local roads for a variety of purposes that result in the integration of adjoining land uses and people with the transportation network.

**P135 Roding hierarchy**

Require new transport corridors to be designed, constructed, and operated in accordance with their intended function in the Roding Hierarchy.

**P136 Multimodal Connectivity**

Require the connectivity of new streets and public accessways with existing infrastructure, in a logical progression and in a manner that does not compromise future subdivision or development of surrounding sites at the time of subdivision.

**P137 Legal and physical access**

Require new allotments to have legal and physical access to a formed legal road.

**P138 Low impact stormwater management**

Encourage the use of low impact stormwater management in subdivision and development Zone where ground conditions are suitable.

**P139 Stormwater mitigation**

Require the use of low impact stormwater management where downstream capacity in the reticulated system likely to be exceeded and ground conditions are suitable.

**P140 Reticulated wastewater**

Require new allotments in the Residential and Neighbourhood Commercial Zones within the urban boundary<sup>29</sup> to connect to reticulated wastewater network, excluding lots for network utilities.<sup>30</sup>

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<sup>29</sup> S27

<sup>30</sup> S27

**P141 Reticulated potable water**

Require new allotments in the Residential and Neighbourhood Commercial Zones within the urban boundary<sup>31</sup> to connect to reticulated potable water network, excluding lots for network utilities.<sup>32</sup>

**P142 On-site servicing**

Require new allotments in the Rural and Rural B Zone to provide for wastewater and stormwater disposal onsite, and sufficient non-reticulated potable and fire fighting water supply.

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<sup>31</sup> S27

<sup>32</sup> S27

**P143 Alternative infrastructure design**

Enable the use of quality alternative infrastructure solutions where they are in accordance with industry best practice, quality urban design and infrastructure design principles where approved by the Manager, Infrastructure Services.

**P144 Assessment of alternatives**

Require the assessment for the approval of alternative infrastructure solutions to be processed through the Alternative Design Procedure and meet the assessment criteria for quality urban design and infrastructure.

**P145 Quality urban design**

Promote subdivision and infrastructure development that demonstrates the ~~good urban design qualities of the~~<sup>33</sup> New Zealand Urban Design Protocol ~~qualities of good urban design.~~<sup>34</sup>

**P146 Low impact development**

Promote the integration of natural processes, including solar energy, landforms, land features, and overland flow paths into subdivision and infrastructure design and construction where appropriate.

**P147 Crime Prevention Through Environmental Design (CPTED)**

Consider the principles of Crime Prevention Through Environmental Design (CPTED) when incorporating public open space into subdivision including passive surveillance, definition of public and private spaces, and access management.

**P148 Site suitability**

Require subdivision creating additional ~~residential~~<sup>35</sup> allotments intended to support building development<sup>36</sup> to provide safe and stable building platforms suitable for ~~residential~~ building<sup>37</sup> development.

**P149 Engineered building platforms**

Avoid the creation of new residential allotments that require significant additional engineering works ~~prior~~ to provide for<sup>38</sup> building development.

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<sup>33</sup> S27

<sup>34</sup> S27

<sup>35</sup> S27

<sup>36</sup> S27

<sup>37</sup> S27

<sup>38</sup> S27

**P150 Telecommunication, electricity and gas networks**

Consider the requirements for telecommunication, electricity and gas networks in the assessment of land use and subdivision consents.

Ensure that applications for subdivision and intensified land use activities:

- a. Can achieve an appropriate level of service for Telecommunication, electricity and gas networks for that allotment and/or use prior to the granting of subdivision consent, AND
- b. That any specific technical requirements to achieve (a) are considered prior to the issue of a Certificate pursuant to Section 224 of the Resource Management Act.<sup>39</sup>

**P151 Springvale indicative Development Plan**

**Require all subdivision and development in the Springvale Indicative Future Development Area to proceed generally in accordance with the provisions of the Springvale Indicative Development Plan to ensure that:**

- a. Stormwater is managed comprehensively and not in an ad-hoc manner;
- b. The transport network is consistent with the Wanganui Urban Transport Strategy, and the indicative roading layout;
- c. Encourages connectivity of services and land uses with public open space;
- d. Quality urban design outcomes are achieved;
- e. Infrastructure is developed in a logical sequence, and generally designed and located as shown on the Springvale Indicative Development Plan.

**P152 Conflict with Indicative infrastructure**

**Avoid Development within the Springvale Indicative Future Development Area that:**

- a. Is in conflict with the indicative transport layout and the stormwater management infrastructure, including ponding areas shown on the Springvale indicative development Plan;
- b. Results in ad-hoc, unconnected, and piecemeal infrastructure development.
- c. Proceeds in advance of a comprehensive plan for managing infrastructure in the Springvale Indicative Development Area.<sup>40</sup>

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<sup>39</sup> S16

<sup>40</sup> S27



**P153 Limited development**

Enable limited development within the area identified as within the Springvale Indicative Future Development Area that is zoned Rural B only where:

- a. It directly adjoins existing areas of residential density<sup>41</sup> development and gains access directly or indirectly<sup>42</sup> from Kelsi Street;
- b. Servicing capacity has been identified as sufficient to service the scale of the proposed development;
- c. The development is generally in accordance with the provisions of the Springvale Indicative Development Plan.

**P154 Springvale Indicative Future Development Area**

Avoid any land use and/or subdivision development that allocates reticulated infrastructure intended to service the Springvale Indicative Future Development Area to other areas.

**P155 Low impact earthworks and land modification**

Promote low impact earthworks and land modification that results in minimal modification to landforms and overland flow paths.

**P156 Effects of earthworks**

Avoid earthworks and land modification that results in damage to property, network utilities<sup>43</sup> or significant nuisance effects.

**P157 Maori values and earthworks**

Enable the incorporation of Maori cultural values and practices into large scale earthworks and land modification, and within areas of cultural significance.

**Policy PXX1 – Cultural Heritage and Development**

Ensure subdivision, infrastructure and earthworks are respectful of historic and cultural<sup>44</sup> heritage, including archaeological sites.<sup>45</sup>

**Policy PXX2 Promote Historic Heritage**

Promote the Identification and protection of areas and values relating to historic heritage, including archaeological sites.<sup>46</sup>

**Policy PXX3 Identification and Protection of Historic Heritage**

Ensure subdivision, infrastructure and earthworks recognise and provide for the identification and protection of historic heritage, including archaeological sites<sup>47</sup>

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<sup>41</sup> S27

<sup>42</sup> S27

<sup>43</sup> S2

<sup>44</sup> S14 Page 7 - Tabled

<sup>45</sup> S14 and FS2

<sup>46</sup> S14 and FS2

<sup>47</sup> S12 and FS2

### **Policy PXX4 Maintenance of Land Transport Networks**

Maintain the ability of land transport networks to efficiently and safely move people and goods through and within the District.<sup>48</sup>

### **Policy PXX5 – Subdivision, Use and Development within Transmission Line Corridors**

To provide for subdivision, use and development within electricity transmission corridors located within the Residential and Rural B Zones that achieve the following:

- (a) Does not compromise the safe and efficient operation, maintenance and upgrading of the transmission network, including by:
  - i. Ensuring security of supply and integrity of transmission assets;
  - ii. not compromising existing access to conductors and support structures for maintenance and upgrading works;
  - iii. Not foreclosing operation and maintenance options, or the carrying out of planned upgrade works.
  - iv. Preventing new incompatible built development in close proximity to the support structures and/or under the area of conductor swing during every day wind.
  - v. Enabling the alteration to and/or extension of existing development already under the area of conductor swing during every day wind where any restrictions or impediments created by that existing development are not further compromised.
  
- (b) Ensure electrical safe distances are maintained.
  
- (c) Manages sensitive activities to avoid exposure to risk and minimise exposure to nuisance and to avoid, remedy or mitigate adverse effects on amenity. Where built development already exists under a particular line span or around an electrical substation, enables additions and/or expansions to such development only where this does not increase, or where it reduces the existing degree of risk or exposure to nuisance and where amenity is maintained or enhanced.
  
- (d) to assist in achieving (a) – (c) above, and to facilitate good amenity and urban design outcomes, takes the proximity of transmission assets into account at the design stage of subdivision including whereby:
  - i. the ability to maintain and inspect transmission assets is protected, including ensuring for access;
  - ii. The potential intensity of incompatible development under and in close proximity to a line is minimised and measures are taken to prevent building within the area of conductor swing during every day wind, including that:

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<sup>48</sup> S12 and FS3

a. A suitable building platform and, where appropriate, curtilage area is identified on each new developable lot, having regard to the range of activities that are likely to be subsequently established; and

b. Measures are taken to prevent building within the area of conductor swing during every day wind

iii. A good level of amenity is achievable.<sup>49</sup>

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<sup>49</sup> S2 – Appendix E Tabled

## Methods

### **M4 Levels of Urban Infrastructure**

~~Within the defined urban *boundary*\*, recognise 2 levels of infrastructure provision:~~

~~a. Urban – where services covering water supply, *roading*\* (including footpaths and streetlights), sewerage collection, treatment and disposal, stormwater collection and disposal and rubbish collection and disposal are available.~~

~~b. Restricted services residential – where limited services are available, no upgrades or extension to improve the level of service will be carried out, and land use *activities*\* are required to provide their own services.~~

Only provide reticulated water services to land contained within the urban boundary\*

### **M5 District Plan Maps showing levels constraints of infrastructure services**

~~Identify on District Plan Maps areas with different levels of infrastructure services and integrate with the identification of urban zones.~~

Identify and map in the District Plan maps areas of infrastructure that are constrained with regard to capacity and have a limited or no further ability to cater for new development.

### **M302 Catchment Capacity**

Council to assess and identify it's infrastructure catchments and identify those that are nearing, at, or exceeding capacity. This information will then be used to review the boundaries and provisions for subdivision and development, including provision for mixed/high density development, in the Residential zone.

### **M17 Prepare a ~~Long~~ term capital works development programme**

~~Prepare as part of the preparation of an Asset Management Plan, a long term capital works *development*\* programme (say 10 years) showing the~~

~~scale, location, sequence, timing, and relative priority of Council\* funded infrastructure development\* to service urban development\*.~~

Prepare a plan that co-ordinates the funding and construction of new infrastructure with identified areas of land for growth and the anticipated landuses.

**M18 District Plan rules for infrastructure provision**

Implement District Plan rules with conditions and terms for infrastructure provision, responsibilities of the developer, and conditions and terms for resource consent to guide private sector *development\**.

**M20 Linked system of open space and reserves**

Develop a linked system of open space and reserves.

**M79 Encourage exchange of information**

Encourage exchange of information and early consultation and negotiations with land users and industry groups regarding *development\** proposals.

**M82 Support/participate in the development and implementation of voluntary codes of practice by industry groups**

**M100 Carry out surveys on subdivision characteristics in the District**

Carry out surveys on *subdivision\** characteristics in the District and report on findings.

**M303 Transition to NZS 4404:2010**

Develop a new companion document for NZS 4404:2004 incorporating appropriate material from NZS 4404:2010 until such time as a new document encompassing the content of the latter document can be programmed and resourced.

**M304 Subdivision and Urban Design Guides**

Develop a Subdivision and Urban Design Guide or Guides to assist Council and Developers integrate good urban design outcomes into developments.

**M305 Low impact stormwater guide/manual**

Develop a guide/manual to help developers successfully integrate low impact stormwater management solutions into development proposals.

**M306 Developers forum**

Establish and co-ordinate an ongoing forum for the development community to openly discuss 'big picture' policy issues around subdivision and development to monitor District Plan effectiveness on an ongoing basis.

**M307 Earthworks best practice guide**

Develop a 'best practice' guide for the undertaking of earthworks to assist in promoting low impact works.

**M308 New Active monitoring**

Actively monitor sites of significant and high risk earthworks for compliance.

**M309 Tangata Whenua monitoring**

Where appropriate, include Tangata Whenua in the monitoring of large scale earthworks.

**M224 Prepare Asset Management Plans. Work to include:**

- a. Assessment of capacities and present and future needs.
- b. Assessment of opportunities, constraints and costs (economic, environmental and social/community).

- c. Evaluation of alternative locations or options for infrastructure development.
- d. Preparation of a long term capital works development programme (say 10 years) showing the scale, location, sequence, timing, and relative priority of Council funded infrastructure development.
- e. Preparation of long term Asset Maintenance Plans that set-out the maintenance programme for Council funded infrastructure services.

**M225 Set out the circumstances for, and amounts of, financial contribution from the developer to the development of new infrastructure services.**

**M226 Identify land requirements (designations or other appropriate provisions) for infrastructure development.**

**M227 Identify heavy transport routes.**

~~M228 Recognise four levels of infrastructure provision within the District:~~

- ~~a. Urban - where services covering water supply, roading (including footpath and streetlights), sewerage collection, treatment and disposal, stormwater collection and disposal, and rubbish collection and disposal are available;~~
- ~~b. Restricted Services Residential - where extension of services from the existing systems is not economic. In these areas land use activities are required to provide their own services.~~
- ~~c. Rural Settlements - where limited services are available. Any future upgrades or extensions to be implemented as part of a comprehensive rural settlement development programme to be planned in consultation with local community.~~

~~d. Rural - where apart from roading, some waste disposal and water supply facilities, services are generally not available. Upgrades and extensions to meet future needs to be monitored and reviewed.~~

~~e. Coastal Residential Zone - where water supply and sewage disposal are reticulated from extension of the urban system and stormwater is dealt with through a zone-specific system.~~

~~M229 Develop appropriate conditions and terms for infrastructure provision, responsibilities of the developer, and conditions and terms for resource consent to guide private sector development.~~

~~M230 Implement rules stating the circumstances for, and amounts of, financial contribution from the developer.~~

**M231 Negotiate with subdividers/developers and apply performance criteria for roading design which will enable land take to be minimised while achieving acceptable safety and efficiency outcomes.**

**M232 Encourage the co-siting of structures, sharing of utility channels and corridors, and the location of utilities within the road reserve.**

**M240 Identify a roading hierarchy on Plan Maps.**

**M241 Implement conditions standards for the design of local access roads.**

~~M242 Periodically review the District Land Use Transportation Plan, eg investigate arterial routes around the urban area and identify the need for upgrading, assess the need for traffic management measures, assess the need and alignment for an alternative limited access road etc.~~

**M243 Designate future roading where desirable to meet demand generated by new subdivision and development.**



- M244** Impose building line restrictions to protect future road widening where it is inappropriate to designate land immediately.
- M245** Depict an indicative roading pattern in strategic areas. These notations will show linkages between land parcels and the road network.
- M246** Consider works and projects through the Council's Annual Plan process and through the mechanisms of the Roading Asset Management Plan and regular traffic safety studies to encourage the safe and efficient movement of cyclists and pedestrians.
- ~~**M247** Promote the adoption of standards for the maintenance, upgrading and construction of roads consistent with the roading standards set out in Subdivision Performance Criteria.~~
- ~~**M248** Liaise and negotiate with the appropriate roading authorities and sector groups regarding transportation needs of new activities including responsibilities for, and costs of, upgrading rural roads.~~
- ~~**M249** Rules that address street congestion and promote safe access arrangements.~~
- M250** Use Land Information Memoranda (LIM's) and Project Information Memoranda (PIM's), and building and resource consent applications to advise of applicable Civil Aviation Regulations relating to airspace restrictions associated with Wanganui Airport.
- M251** Support the declaration use of Limited Access Roads as appropriate.<sup>50</sup>
- M252** Identify environmentally sensitive areas, eg landscape protection areas, waahi tapu sites etc.
- M253** Develop advisory guidelines for landscape protection.

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<sup>50</sup> Roads with very high traffic volumes may be declared "Limited Access Road" (LAR) under Part XXI of the Local Government Act 1974 or under the Transit New Zealand Act 1989. The effect of an LAR declaration is to reduce, or control at an acceptable intensity, access to the road to protect the efficiency and safety of the road for the road user. The majority of LARs are State Highways, controlled by Transit New Zealand.

- M254** Identify the circumstances and criteria for requiring environmental impact assessment.
- M255** Provide conditions and terms for permitted activities and use resource consents and designations (notice of requirements) procedures to assess the environmental effects of utility activities where they are not permitted activities and are not undertaken in accordance with an existing designation.
- M256** Establish mechanisms for liaison and consultation with, and participation of, Iwi in matters relating to the impact of infrastructure development on sites or land of significance to Iwi.
- M257** Co-ordinate activities among network utility operators and, where possible, jointly develop projects to avoid, remedy or mitigate effects, particularly the impact of construction.
- M258** Encourage utility operators to site and operate their works in a manner which avoids, remedies or mitigates any adverse effect on health and safety of the public.
- M259** Encourage utility companies to remedy or mitigate the visual effects of new distribution and reticulation networks (such as lines and pipes) by undergrounding them, particularly in urban areas and rural residential developments. It is recognised that geotechnical and other physical factors may prevent this happening in some circumstances. Encourage new (above ground) transmission networks to avoid where practicable, urban and rural residential areas.
- ~~M260~~ Implement conditions and terms for access to new lots and development.
- ~~M261~~ Implement conditions and terms for water supply waste disposal, sewage disposal and electricity and gas supply arrangements for new lots and developments.
- ~~M262~~ Prepare a Corridor Management Agreement in consultation with affected parties.

~~M263 Consider by-laws to address inappropriate heavy vehicle movement and parking issues.~~

~~M264 Use By-laws to manage the location and width of vehicle crossings.~~

**Method MX1 Liaison with Historic Places Trust.**

Encourage liaison with the New Zealand Historic Places Trust.<sup>51</sup>

**Method MX2 Promotion of Historic Places Act**

Promote compliance with the requirements of the Historic Places Act 1993 relating to archaeological sites for subdivision, infrastructure and earthworks activities.<sup>52</sup>

**Method MX3 Subdivision and Earthworks Archaeological Advice Note**

The following advice note may be placed on land use and subdivision consent decisions where there archaeological sites are present or likely to be present:

**Advice note: It is possible that archaeological sites may be affected by work authorised under this District Plan. Evidence of archaeological sites may include burnt and fire cracked stone, charcoal, rubbish heaps including shell, bone and/or glass and crockery, ditches, banks, pits, old building foundations, artefacts of Maori and Europeans origin or human burials. The applicant is advised that to contact the New Zealand Historic Places Trust if the presence of an archaeological site is suspected. Work affecting by archaeological sites is subject to a consenting process under the Historic Places Act 1993. If an activity such as earthworks, fencing, or landscaping may modify, damage or destroy any archaeological site(s) an authority (consent) from New Zealand Historic Places Trust must be obtained for work to proceed lawfully. The Historic Places Act 1993 contains penalties for unauthorised site damage.**<sup>53</sup>

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<sup>51</sup> S14 and FS2

<sup>52</sup> S14 and FS2

<sup>53</sup> S14 and FS2

## **Rules/ Standards**

### **R15 General Rule - Utilities**

In this section, “utilities” shall have the same meaning as “network utilities\*” as outlined in Definitions. The zone rules shall apply to utilities only where specifically stated in this section. The other “general rules” shall also apply to utilities.

#### **1. Permitted activities**

The following are permitted activities throughout the District:

The construction, operation, maintenance and upgrading of any of the following *utilities\** provided that these comply with the conditions and terms:

- a.** Pole and ground mounted transformers and switchgear, and lines and support structures for conveying electricity at a voltage up to and including 110kV ~~with a capacity up to and including 100MVA per circuit.~~<sup>54</sup>
- b.** Underground pump stations and pipelines, and ancillary equipment for water supply, the drainage of water or sewage, and necessary incidental equipment.
- c.** Underground pipeline operations for the distribution of natural or manufactured gas at a gauge pressure not exceeding 2000 kPa and necessary incidental equipment including pressure reduction and metering installations.
- d.** Culverts, drains, irrigation races or other structures for the conveyance of water.
- e.** Navigational aids and beacons.
- f.** Meteorological structures and activities.
- g.** Road, bridge, culvert and drain construction, upgrading and maintenance, traffic management and control structures, street lighting and street furniture, provided that the above is undertaken within road reserve or, if outside road reserve, that it is in accordance with an approved designation, *subdivision\** or resource consent.
- h.** Underground or above ground telecommunication or radio communication lines (“lines” as defined by section 2(1A) of the Telecommunications Act 1987) and antennas, including microwave dishes, with a diameter of 5 metres or less, provided that supporting *structures\** are 20 metres or less in height.

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<sup>54</sup> S2

i. Other telecommunications or radio communication facilities which comply with the standards below or with the bulk and location requirements of the particular zone in which the activity is located.

j. Transformers and substations, lines and support *structures\** for conveying electricity (at any voltage) and associated telecommunication lines and their maintenance and upgrading, provided such facilities were in existence and operational at 15 November 1996. The conditions and terms below do not apply in respect of these activities.

k. Soil conservation, erosion control, river control, or flood protection works undertaken by, or on behalf of, a territorial or regional local authority.

## 2. Conditions and terms

The following conditions and terms apply to *network utilities\**, except that they do not apply in relation to the maintenance or upgrading of existing *utilities\** where the character, intensity and scale of the *utility\** remains the same or similar:

### a. Reinstatement

Where the construction or maintenance of a *utility\** involves disturbance to the ground, at the completion of the work the ground shall be reinstated to the condition existing prior to commencement of the work.

### b. Noise

Activities shall comply with the noise standards for the zone in which they are situated except that sound emissions are to be measured at the outside wall of any *dwelling unit\** on an adjoining *site\**.

### c. Lighting

Any artificial lighting system shall ensure that its use does not result in an added illuminance, over and above the measured ambient level in excess of 10 lux measured at the boundary of any residentially zoned *site\**.

### d. Structures

All above ground *structures\** shall comply with the “structures” conditions and terms for any zone in which they are located except that:

i. *Structures\** provided for in **a.** and **h.** above and antennas and aerials shall not have to comply with any conditions and terms that control the height and setback of *structures\** or *site coverage\** standards.

ii. *Structures\** with a floor area not exceeding 10m<sup>2</sup> and a height not exceeding 5 metres shall not have to comply with any conditions and terms that control the height and setback of *structures\** or *site coverage\** standards.

### e. Undergrounding of Lines and Pipes

The following conditions apply to lines and pipes but not to incidental equipment which require an above ground location:

i. Lines shall be located underground except in the following circumstances:

- where they traverse any Rural Zones or roads within the Rural Zone; or

- where it is not practicable due to geological or topographical constraints;

or

- the lines are part of any maintenance, repair, replacement or upgrading of existing overhead lines. (“Upgrading” for the purposes of this condition means any increase in the carrying capacity, efficiency or security of lines or cables, or any new overhead lateral customer connections from existing overhead lines, in either case, utilizing the already existing support *structures\** or *structures\** of a similar scale and character).

ii. All pipes for network reticulation shall be located underground.

iii. Where lines are to provide temporary links, connections or services, they may be above ground for up to three consecutive months.

**f. Hazardous substances**

Any utility which is a new or expanded *hazardous facility\** is subject to the provisions of Appendix A6 - Hazardous Facility Screening Procedure.

*Reason*

~~The conditions and terms for permitted activities are intended to ensure that any potential effects of activities are addressed at the time the activity is established, and also that the utilities blend with the environment\* in which they are established.~~

**3. Restricted discretionary activities**

Any permitted activity which does not comply with the relevant conditions and terms. In exercising its discretion, the *Council\** shall be limited to the conditions with which that activity fails to comply.

An application need not be notified if written approval has been obtained from every person whom the *Council\** is satisfied may be adversely affected by the granting of the resource consent unless the *Council\** considers it is unreasonable in the circumstances to require the obtaining of every such approval.

**4. Unrestricted discretionary activities**

The following are discretionary activities throughout the District:

The construction, alteration and addition to the following *structures\** are discretionary activities throughout the District:

**a.** Electricity substation.

**b.** Depots for the maintenance, upgrading, alteration, or security of lines or pylons associated with the National Grid.

- c. Transformers and lines and support *structures*\* for conveying electricity at a voltage exceeding 110kV ~~and a capacity exceeding 100MVA per circuit.~~<sup>55</sup>
- d. Pipes for the transmission of natural or manufactured gas at a gauge pressure exceeding 2000 kilopascals and necessary incidental equipment.
- e. Any other utility structure or activity not listed as a permitted or controlled activities.

## **R24 General Rule - Transportation**

The following rules apply throughout the district:

### **1. Permitted activities**

The following are permitted activities throughout the District:

- a. Any activity which complies with the following conditions and terms:

### **2. Conditions and terms**

#### **2.1 Parking**

- a. Every activity shall provide a minimum number of on-site parking spaces as specified in the following table:

#### Parking Standards

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<sup>55</sup> S2

Activity	Car Parking Spaces Required
<b>Residential activities</b>	
Dwelling units	1 space per dwelling unit.
Residential care facilities	1 space per 5 beds plus 1 space per staff member.
<b>Community activities</b>	
Places of assembly	1 space per 10 seats or 3 per 100 m <sup>2</sup> gross floor area where facility not intended for seating.
Pre-school and primary educational facilities	1 space per staff member
Secondary and tertiary educational facilities	1 space per staff member plus one space per 10 students over minimum driving age
Recreation facilities	1 space per 10 seats or 5 spaces per 100 m <sup>2</sup> gross floor area where facility is not intended for seating.
Health care facilities	3 spaces per consultant room used by doctor/health specialist.
Hospitals	1 space per 5 beds plus 1 space per 2 staff.
Marae	1 space per 100 m <sup>2</sup> gross floor area.
<b>Commercial activities</b>	
All commercial activities other than those specified below	2 spaces per 100 m <sup>2</sup> gross floor area.
Supermarkets	5.5 spaces per 100 m <sup>2</sup> gross floor area.
Restaurants	1 space per 4 seats plus 2 spaces per 100 m <sup>2</sup> gross floor area.
Visitor accommodation	1 space per room/unit.
Service stations	5 spaces per service bay (1 space being the bay itself) plus 1 space per 100 m <sup>2</sup> of gross floor area used for servicing vehicles plus 2 space per 100 m <sup>2</sup> of gross floor area used for retailing.
Offices	3 per 100 m <sup>2</sup> gross floor area.
<b>Manufacturing activities</b>	
Funeral Parlours	1 space per 10 seats.
Manufacturing activities	1 space per 100 m <sup>2</sup> gross floor area or 1 space per 4 employees, whichever is greater.
<b>Rural activities</b>	
Retail activities in the Rural Zone	4 spaces per retail site.
Rural industry	1 space per 100 m <sup>2</sup> floor area or 1 space per 4 employees, whichever is greater.

**b. Interpretation of parking standards**

- i. Where an activity is not listed, the number of car parking spaces to be provided shall be the standard for the activity which most closely resembles the proposed activity in terms of car parking demand.
- ii. In determining parking requirements, any fraction more than one-half shall be regarded as one space.
- iii. Where a parking standard is related to the number of staff or students on a *site*<sup>\*</sup>, the number to be used shall be the maximum number on-site at any one time (i.e. at peak times).

**c. Parking areas shall be designed and located so as to:**

- i. promote use of the on-site parking area rather than the road side for parking,
- ii. minimise conflicts between traffic entering and leaving the *site*<sup>\*</sup>.

**d. Any landscaping or screening of parking areas shall be designed and maintained so as to ensure visibility and safe access and egress between the parking area and the road.**



*Reason*

~~Standards (a) to (d) above aim to ensure that the safe and efficient operation of roads is not impeded by the effects of roadside parking, nor of vehicles entering and leaving on-site carparking areas.~~

## 2.2 Loading

1. All commercial and industrial uses shall demonstrate adequate access to an area for the loading and unloading of goods and shall meet the following requirements:<sup>56</sup>

- a. Loading bays shall be designed and located so as to provide a safe position for loading and unloading of goods and providing access and egress without affecting any road or *service lane*\*
- b. Loading bays shall be designed and located so as to:
  - i. promote use of the loading bay rather than the road side for loading and unloading of goods,
  - ii. minimise conflicts between traffic entering and leaving the *site*\*
- c. The area of the loading bay(s) shall be sufficient in size to cater for the largest expected vehicle, plus manoeuvring space around that vehicle.

*Reason*

~~Standards (a) to (c) above aim to ensure that the safe and efficient operation of roads is not impeded by the location of stationary service vehicles nor the manoeuvring of such vehicles. It is preferable that vehicle movement, to and from sites be in a forward direction where possible.~~

## 2.3 Property access

- a. Each new allotment and additional dwelling shall be serviced by at least one formed vehicle crossing onto a formed legal road.
- b. In addition to a. above,
  - i. For new dwellings being served by a shared accessways and Rights of Way, these shall be required to be constructed to the width specified by this Plan

**Note: All new or upgraded crossings are required to use the Wanganui District Council Corridor Access Request system, except that this shall not apply where Council is not the Road Controlling Authority.**

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<sup>56</sup> S27

**Note: The removal of street trees for the purpose of creating a vehicle crossing is not managed by the District Plan. The Parks and Property Department of the Wanganui District Council should be contacted whenever alteration or removal of a street tree is proposed or required.**

**2.4 Design and formation standards:**

a. All vehicle crossings shall be located, designed and constructed so that vehicles can enter and leave the *site*\* without adversely affecting the safe and efficient operation of the road.

~~b. The maximum width of any vehicle crossings shall be 6.0 metres; and 3.5 metres when serving a single dwelling.~~

b. Vehicle crossings in the Residential Zone shall be a minimum of 3.5 metres and a maximum of 6 metres in width at the boundary perpendicular to road reserve.

c. In respect of national routes, primary arterials and secondary arterials (as ~~defined~~ shown on the Planning Maps), vehicle access and egress shall be in a forward direction, with sufficient on-site manoeuvring space as required to achieve this.

d. All vehicle crossings shall be designed and constructed so as not to adversely affect the safe and efficient operation of the road between the carriageway and the property boundary (including any services and drainage systems).

e. All vehicle crossings shall be designed, constructed and maintained to ensure that they are formed and sealed (except for metalled roads in the Rural or Rural Settlement Zones) and to ensure that stormwater and detritus (including gravel and silt) do not migrate onto the carriageway pavement.

f. The design and construction of vehicle crossings shall be in accordance with the requirements of NZS 4404 2004 and the Wanganui District Council Engineering Document 2012, except where a crossing design is specified in this Plan in which case that design will apply.

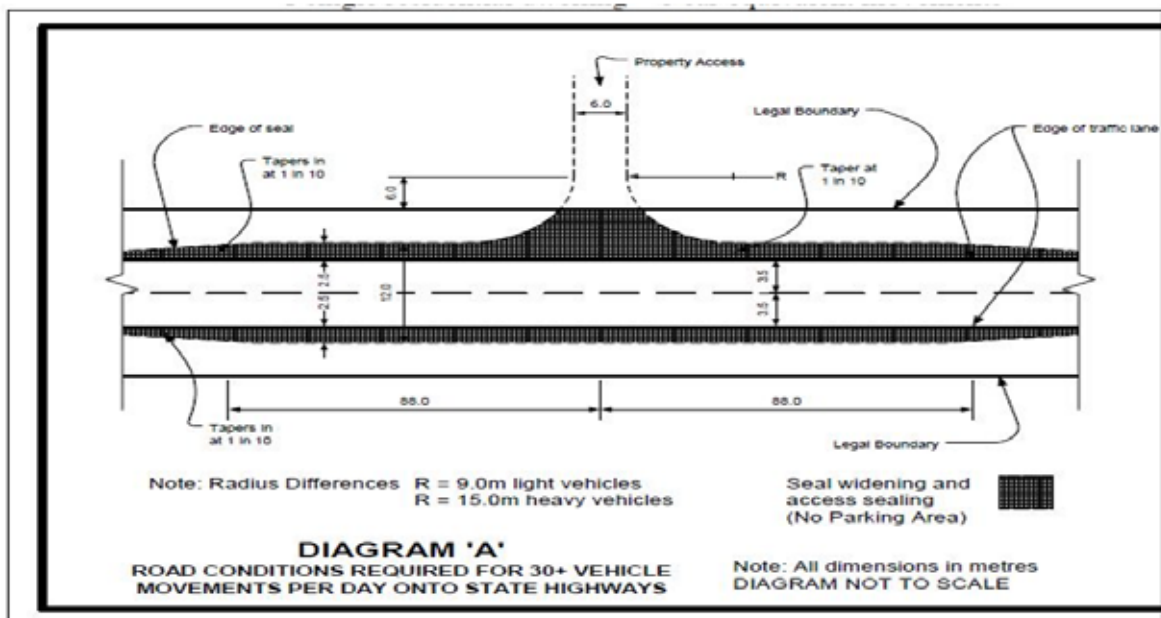
g. Properties with a street frontage of up to 21 metres are permitted a maximum of 2 vehicle crossings per *site*\*

h. Properties with a street frontage over 21 metres are permitted a maximum of 3 vehicle crossings per *site*\*

*Reason*

~~Standards (a) to (e) above aim to ensure that accesses are designed and constructed in a manner that will not adversely affect the safe and efficient operation of roads in any significant way. A maximum crossing width of 6 metres is imposed to enable any proposals for wider crossings to be considered on their merits. It is generally desirable from a traffic safety point of view to confine vehicle movements to defined points so as to reduce the potential for conflicting and higher speed vehicle movements to and from sites\*.~~

- f. **g.** New vehicle crossings, and existing vehicle crossings serving a new activity, shall meet the design standards in Diagram A when all the following circumstances exist:
- i. The road is a National route, primary arterial or secondary arterial (as defined on the Planning Maps); and
  - ii. the road has a speed limit of 100 km/hr or more at the access location; and
  - iii. the activity concerned is a high traffic generating activity which, for the purpose of this standard, shall be defined as an activity which generates more than 30 car equivalent movements per day (24 hour period) averaged over a normal week, where:
    - 1 car to and from the site = 2 car equivalent movements
    - 1 truck to and from the site = 6 car equivalent movements
    - 1 truck and trailer to and from the site = 10 car equivalent movements
    - 1 single residential dwelling = 8 car equivalent movements



*Reason*

~~Standard (f) above, aims to allow most new crossing places to be permitted activities, while requiring specific access design only in relation~~

~~to high traffic generating activities seeking access to high speed arterial roads. The alternative of not having any controls over access for high traffic generating activities to high speed arterials is not appropriate for traffic safety and efficiency reasons. At the other extreme, the alternative of requiring a resource consent for all new accesses to state highways (regardless of nature and location of activity) is also not considered to be necessary or appropriate.~~

Note: Transit NZ New Zealand Transport Agency approval is required for access onto State Highways under section 91 of the Transit NZ Act.

## **2.5 Separation distance between accesses**

~~Roads where speed limit is less than 70 km/hr:~~

~~g. In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between accesses (either single or combined) on the same side of the road shall be:~~

- ~~i. not less than 7.5 metres for residential land uses,~~
- ~~ii. not less than 15 metres for all other land uses.~~

~~-~~

~~h. In relation to any road not covered by (g) above, there is no minimum standard for the minimum distance between accesses.~~

~~Roads where speed limit is 70 km/hr or more:~~

~~-~~

~~i. In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between successive accesses (regardless of the side of the road on which they are located) shall be not less than:~~

- ~~•40 metres for 70 km/hr roads,~~
- ~~•100 metres for 80-90 km/hr roads,~~
- ~~•200 metres for 100 km/hr roads.~~

~~j. In relation to any road not covered by (i) above, there is no minimum standard for the minimum distance between accesses.~~

### *Reason*

~~Standards (g) to (j) above, recognise the distinction between, on the one hand, arterial roads where control of access density is important to protect the through-traffic function of roads and, on the other hand, lower-order roads which do not require such controls due to their higher functional emphasis on property access. The above standards also vary the access density standards dependent on the speed of the arterial road concerned. This is a performance based approach which recognises that urban arterials do have a significant property access function as well.~~

## **2.6 Separation distance between accesses and intersections**

~~Roads where speed limit is less than 70 km/hr:~~

~~k. In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 15 metres.~~

-

~~l. In relation to any road not covered by (k) above, the minimum distance between an access and a road intersection shall be 10 metres, except that where the road intersects with a national route, primary arterial or secondary arterial, the minimum distance shall be 15 metres.~~

## 2.5 Separation distances

a. Vehicle crossings shall be required to meet the provisions of the following table:

**Table 2 – Crossing Standards**

<u>Road Type</u>	<u>Minimum separation between crossings – Meters (m)</u>	<u>Minimum separation between crossings and intersections – Meters (m)</u>	<u>Minimum sightline distance - Meters (m)</u>
<u>Less than 70km and a Primary or Secondary Arterial Road</u>	<u>7.5m for residential uses</u> <u>15 for all other uses</u>	<u>15m</u>	<u>50kph and 60kph zones - 100m</u>
<u>Less than 70km and not Primary or Secondary Arterial Road</u>	<u>None</u>	<u>10m</u> <u>15m</u> <u>(where the intersection is with a Primary or Secondary Arterial Road)</u>	<u>None</u>
<u>More than 70km and Primary or Secondary Arterial Road</u>	<u>70km – 40 m</u> <u>80km to 90km – 100 m</u> <u>100km – 200m</u>	<u>100m</u>	<u>70kph to 90kph zones – 175m</u> <u>100km zones – 290m</u>
<u>More than 70km and not Primary</u>	<u>None</u>	<u>30m</u>	<u>None</u>

<u>or</u> <u>Secondary</u> <u>Arterial</u> <u>Road</u>			
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~~m.b.~~ The measurement of separation distances between crossings and intersections shall be taken from the nearest corner junction point of the road reserve boundaries at the intersection (or their projection in respect of “T” intersections) and shall be measured to the nearest edge of the access to the intersection for roads where the posted speed limit is 70km/hr or less.

~~Roads where speed limit is 70 km/hr or more:–~~

~~n.~~ In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 100 metres.

~~o.~~ In relation to any road not covered by (n) above, the minimum distance between an access and a road intersection shall be 30 metres.

~~p. c.~~ The measurement of separation distances between crossings and intersections shall be taken from the intersection of the centrelines of the intersecting roads for roads where the posted speed limit exceeds 70km/hr.

*Reason*

*Standards (k) to (p) above aim to ensure that vehicle crossings are not located unduly close to road intersections, for traffic safety and efficiency reasons. The separation distance required increases with the speed environment and the nature of the road concerned.*

**2.7 Sight distance standards**

~~q.~~ In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum sight distance from vehicle crossings and intersections shall be:

- ~~•100 km/hr speed limit: 290 metres in both directions,–~~
- ~~•70-90 km/hr speed limit: 175 metres in both directions,–~~
- ~~•50-60 km/hr speed limit: 100 metres in both directions.~~

~~r.~~ No building\*, fence or vegetation on any property shall be erected or permitted to grow in a manner which adversely affects visibility to or from any road intersection.

*Reason*

*Standards (q) and (r) above, aim to ensure that there is adequate sight distance available to and from vehicle crossings to ensure that movements can be made safely. The required sight distance increases for higher speed roads because vehicles cover distances much faster. Sight*

~~distances can be impeded by curves or crests in the road, or by other obstacles.~~

### 2.5.1 Vehicle separation from railway level crossings

a. New vehicle accessways shall be located a minimum of 30 metres from a railway level crossing.<sup>57</sup>

### **2.8 6 Restriction on new accesses**

a. No new vehicle access shall be created from the following roads:

- Victoria Avenue between Taupo Quay and Ingestre Street,
- Guyton Street between Wicksteed Street and St Hill Street,
- Ridgway Street between Drews Avenue and St Hill Street,
- Maria Place between Watt Street and St Hill Street.

#### *Reason*

~~The Council\* seeks to maintain retail frontage, and to minimise vehicle/pedestrian conflicts in this busy commercial area. Vehicular access to properties along the above streets can be obtained by alternative means such as rear access or service lanes\*.~~

### **2.9 7 Vehicle crossings - other standards**

a. Where an existing vehicle crossing to a property becomes redundant for any reason, then that vehicle crossing shall be removed and the berm, footpath, kerb and channel reinstated to a design and standard consistent with any adjacent berm, footpath, kerb and channel.

#### *Reason*

~~It is desirable to maintain the integrity of the road and pavement functions.~~

### **2.10 8 Service lanes**

- a. *Service lanes\** shall be designed and located so as to provide safe access and egress without adversely affecting any road.
- b. The width of *service lanes\** intended for one-way operation shall be not less than 3.5 metres nor more than 6.0 metres.
- c. The width of *service lanes\** intended for two-way operation shall be not less than 6.0 metres nor more than 10.0 metres.

#### *Reason*

~~It is important that *service lanes\** be of sufficient width to serve delivery vehicles of varying sizes. They should be designed and located so as to provide a safe position for access and egress.~~

### **2.11 9 Vehicle queuing (stacking) and servicing**

a. In relation to all:

- i. fuel dispensers,

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<sup>57</sup> S12 and FS3

ii. ticket vending machines,  
iii. entrance control mechanisms,  
there shall be sufficient vehicle queuing or stacking space to ensure that cars waiting at normal peak times do not obstruct the road carriageway or footpath.

b. For remote ordering facilities and devices, including fast food drive through facilities, a minimum of 5 queuing or stacking car spaces is required.

*Reason*

~~Standards above aim to ensure that the safe and efficient operation of roads and service lanes is not impeded by the effects of roadside parking, nor of vehicles queuing to enter a carparking area or drive-through facility.~~

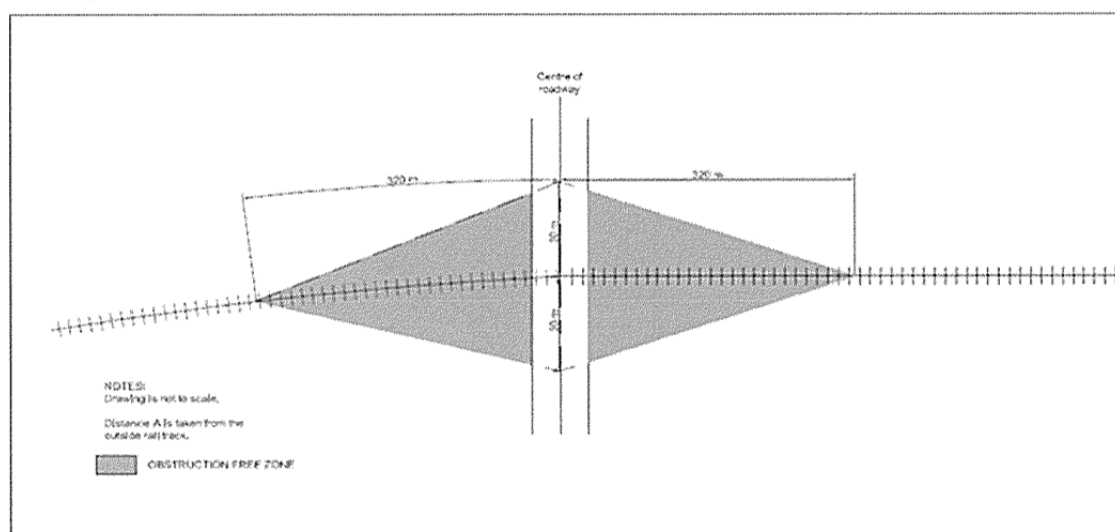
## 2.10 Developments Near Existing Level Crossings

1. All the conditions set out in this standard apply during both the construction and operation stages of development.

### a. Approach sight triangles and level crossings with Stop or Give Way signs

i. On sites adjacent to rail level crossings controlled by Stop or Give Way signs, no building, structure or planting shall be located within the shaded areas of figure 1. These are defined by a sight triangle taken 30 metres from the outside rail and 320 metres along the railway track.

**Figure 1: Approach Sight Triangles for Level Crossings with “Stop” or “Give Way” Signs**



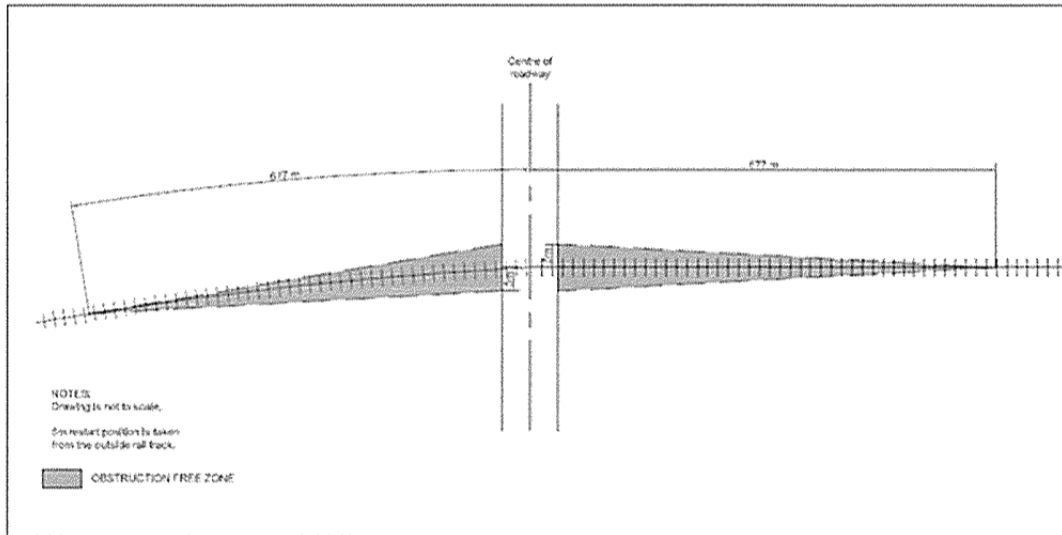
ii. No approach sight triangles apply for level crossings fitted with alarms and/or barrier arms.



**b. Restart sight triangles at level crossings**

i. On sites adjacent to all rail level crossings, no buildings, structure or planting shall be located within the shaded areas shown in Figure 2. These are defined by a sight triangle taken 5 metres from the outside rail and distance A along the railway track. Distance A depends on the type of control (Table 1).

**Figure 2 Restart Sight Triangles for all Level Crossings**



**Table 1: Required Restart Sight Distances for Figure 2**

Required approach visibility along tracks A (m)		
Signs only	Alarms only	Alarms and barriers
677 m	677 m	60 m

**Advice Notes:**

1. Figures 1 and 2 show a single set of rail tracks only. For each additional set of tracks add 25 m to the along-track distance in Figure 1, and 50 m to the along-track distance in Figure 2

2. All figures are based on the sighting distance formula used in NZTA Traffic Control Devices manual 2008, Part 9 Level Crossings.<sup>58</sup>

**3. Discretionary activities**

The following are discretionary activities throughout the District where the Council\* will restrict the exercise of its discretion:

a. Any permitted activity which does not comply with the relevant conditions and terms. In exercising its discretion the Council\* shall be limited to the conditions and with which the activity fails to comply.

An application need not be notified if written approval has been obtained from every person whom the Council\* is satisfied may be adversely

<sup>58</sup> S12 and FS3

affected by the granting of the resource consent unless the *Council*\* considers it unreasonable in the circumstances to require the obtaining of every such approval.

\* *refer to definitions*

Status: Operative

**R259 General Rule - National Environmental Standards**

The provisions of the following National Environmental Standards for shall apply with no further alteration or modification by this Plan:

a. The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

**Note: The above National Environmental Standard only applies to the actual or potential effects of contaminants in soil on human health. Additional resource consents may be required by that standard, or by the Regional Council.<sup>59</sup> All other provisions within this Plan that do not manage the effects of contaminants in soil on human health will still<sup>60</sup> apply.**

**2. A copy of the Standard can be found on the website for the Ministry for the Environment.<sup>61</sup>**

b. The National Environmental Standards for Electricity Transmission Activities

**Note:**

**1. The National Environmental Standard for Electricity Transmission Activities (NESETA) contains provisions that apply to the operation, maintenance, upgrading relocating, or removal of National Grid assets existing as at 14 January 2010. Except as provided for by the NESETA, no rules in the District Plan apply to such activities.<sup>62</sup>**

**2. A copy of the Standard can be found on the website for the Ministry for the Environment.<sup>63</sup>**

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<sup>59</sup> S15

<sup>60</sup> S15

<sup>61</sup> S15

<sup>62</sup> S15

<sup>63</sup> S15

## **Subdivision**

### **R260      Controlled Activities:**

The following are controlled activities in all zones:

- a. Boundary adjustments, subject to meeting the Performance Standards for the relevant zone.
- b. Conversion of cross lease allotments to freehold.

Council retains control over following matters:

1. The extent to which the amenity values of the surrounding areas are affected and compliance with the general subdivision Standards.

**Note: Applications subject to this rule shall be considered without service, public notification or written approvals from affected persons.**

### **R261      Restricted Discretionary Activities:**

The following are restricted discretionary activities:

- a. Subdivision in the Residential Zone, Rural B Zone, Neighborhood Commercial Zone, and Reserves and Open Space Zone unless otherwise stated.

Council restricts its discretion to the following matters:

1. the ability and the requirement for of<sup>64</sup> a proposal to meet all<sup>65</sup> the relevant Subdivision and Infrastructure Performance Standards, Policies and Rules.<sup>66</sup>
2. the ability of the proposal to meet the relevant General Urban Design Criteria, Subdivision<sup>67</sup> General and i<sup>68</sup>Infrastructure specific<sup>69</sup> Assessment and Performance<sup>70</sup> Criteria.

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<sup>64</sup> S27

<sup>65</sup> S27

<sup>66</sup> S27

<sup>67</sup> S27

**Note: Applications subject to this rule shall be considered without service, public notification or written approvals from affected persons.**

**Refer to [Resource Consent Assessment Criteria.](#)**

**R262 Discretionary Activities:**

The following are discretionary activities:

- a. Any subdivision or infrastructure development that results in non-compliance with any Performance Standard or Standards unless otherwise stated.
- b. All<sup>71</sup> ~~ss~~<sup>72</sup> subdivision within the Springvale Indicative Future Development Area, including boundary adjustments that:<sup>73</sup>
  - i) ~~that g~~Gains legal and physical access from Kelsi Street;  
AND<sup>74</sup>
  - ii) Are in<sup>75</sup> general accordance with the key infrastructure linkages and indicative roading layout, detailed in the Springvale Indicative Development Plan that gains access from Kelsi Street<sup>76</sup>
- c. Subdivision in the Residential Zone that does not meet the minimum net allotment size of 450m<sup>2</sup> 400m<sup>2</sup>.<sup>77</sup>
- d. Subdivision in the Otamatea Development Overlay that does not meet the minimum net allotment size of 1000m<sup>2</sup>.

**Refer to [Resource Consent Assessment Criteria.](#)**

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<sup>68</sup> S27  
<sup>69</sup> S27  
<sup>70</sup> S27  
<sup>71</sup> S27  
<sup>72</sup> S27  
<sup>73</sup> S27  
<sup>74</sup> S27  
<sup>75</sup> S27  
<sup>76</sup> S27  
<sup>77</sup> S3

**R263 Non-Complying Activities:**

The following are non-complying activities:

a. All other s<sup>78</sup> Subdivision in addition to R262(b)<sup>79</sup> in the Springvale Indicative Future Development Area not provided for by R262(b).<sup>80</sup>

b. Subdivision in the Rural B Zone, excluding allotments within the Springvale Indicative Development Area that proposes to connect to or extend reticulated infrastructure including water, wastewater, and piped stormwater drains.

c. Any s<sup>81</sup>ubdivision and/<sup>82</sup>or infrastructure<sup>83</sup> development that fails to comply with any Performance Standard or Rule where and is not specified as provided for as discretionary activities the result of non-compliance is stated and determining an application a Non-Complying Activity.<sup>84</sup>

d. Subdivision of land within the Electricity Transmission Corridor where the identified building platform cannot be located wholly outside the Electricity Transmission Yard.<sup>85</sup>

[Refer to Resource Consent Assessment Criteria.](#)

**Performance Standards**

The following Performance Standards apply to all subdivision development unless otherwise stated:

**R264 Performance Standard - Subdivision engineering basis**

Subdivision and infrastructure design and construction shall be in accordance with NZS: 4404 2004 and the Wanganui District

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<sup>78</sup> S27

<sup>79</sup> S27

<sup>80</sup> S27

<sup>81</sup> S27

<sup>82</sup> S27

<sup>83</sup> S27

<sup>84</sup> S27

<sup>85</sup> S2 – Appendix E Tabled

Council Engineering Document 2012. Where there is conflict between NZS 4404 2004 the Engineering document prevails. The provisions in the District Plan shall prevail over both NZS 4404 2004 and the Supplement.

**R265 Performance Standard - Boundary Adjustments**

a. Boundary Adjustments shall comply with the following Standards:

- i. No additional number of titles shall result; and,
- ii. Existing allotments that comply with the minimum site area for the zone prior to the boundary adjustment should not be made non-compliant; and,
- iii. Existing allotments that do not comply with a minimum site area for the zone shall not be made less compliant; and
- iv. The allotments being adjusted must share a contiguous boundary.

**R266 Performance Standard - Existing Buildings**

a. Any new boundaries created by subdivision shall be located such that any existing buildings comply with the rules of the relevant zone or that the appropriate land use consents have been obtained.

b. Subdivisions shall comply with all other relevant and remaining Rules and provisions of the Plan. the General Rules of this Plan\* to the extent that they are applicable. In particular, rules in the following plan sections apply:  
~~- Rule R17 – Natural and Cultural Heritage Resources~~  
~~- Rule R18 – Protected Trees~~  
~~- Rule R19 – Riparian Margins~~  
~~- Rule R24 – Transportation<sup>86</sup>~~

**R267- Performance Standard - Allotment Size**

a. New allotments, including balance allotments, shall meet the requirements of the following table:

**Table 1 Minimum net allotment area**

<u>Zone</u>	<u>Site Allotment Size Requirements - Net Site Area – Metres<sup>2</sup> (m<sup>2</sup>)</u>
<u>Rural B</u>	<u>Minimum 5000m<sup>2</sup></u>

<sup>86</sup> S14 and FS2

<u>Residential</u>	<u>Minimum 450m<sup>2</sup> - 400m<sup>2</sup></u> <sup>87</sup>
<u>Neighbourhood Commercial</u>	<u>None</u>
<u>Reserves and Open Spaces</u>	<u>None</u>
<u>Otamatea Development Overlay</u>	<u>Minimum 1000m<sup>2</sup></u>
<u>Springvale Indicative Future Development Area</u>	<u>Refer to the underlying zoning except that the Residential Zone provisions apply to land subject to Rule R262(b).</u> <sup>88</sup>
<u>Sites Specifically for Network Utilities</u>	<u>No Minimum</u>
<u>Rural</u>	<u>10,000m<sup>2</sup> (1 Hectare)</u>
<u>All other zones</u>	Allotments shall be of sufficient size and shape to contain an activity or development in a manner that complies with the rules and standards for the zone concerned.

~~b. In all other zones without a minimum lot size, allotments shall be of sufficient size and shape to contain an *activity*\* or development in a manner that complies with the rules and standards for the zone concerned.~~<sup>89</sup>

### R268 Performance Standard - Easements

~~a. Where private service connections, the diversion of overland flows, and vehicle access will be located over private property, including the diversion of overland flowpaths, subdivision – the subdivider<sup>90</sup> shall be required to provide suitable easements in respect of any of the following:~~

- ~~i) the creation of right of way access to any allotment~~
- ~~ii) the right in respect of a dominant tenement or easement in gross to lay, construct, erect, convey, discharge or maintain an underground or overhead water, electric power, telecommunications, gas, sewage, or stormwater service; widths shall be in accordance with the requirements of NZS 4404 2004 and the Wanganui District Council Engineering Document 2012 unless stated in this Plan.~~

<sup>87</sup> S3, S18 and FS1

<sup>88</sup> S5

<sup>89</sup> S27

<sup>90</sup> S27



iii) any other easement that the specific situation may require.

### **R269 Performance Standard - Site suitability**

a. Each allotment intended to accommodate building development in the future shall identify at least one potential Building Platform that meets all of<sup>91</sup> the following:

- i. In the Residential Zone ~~the~~<sup>92</sup> the Building Platform shall be a rectangular area of land for building purposes measuring no less than 10 metres by 15 metres;
- ii. For subdivision in Zones that require on-site effluent disposal shall also be required to identify an area of no less than 30 metres by 30 metres suitable for on-site effluent disposal,
- iii. For all other zones, identify an area suitable for the likely scale and nature of development.
- iv. For unit title and multiple unit developments in the Residential Zone, a building platform shall identify the area that is intended for future building.<sup>93</sup>

b. In addition, the identified Building Platform shall be required to meet the following requirements:

- i. Shall be free of buildings and structures (where intended for future development), building restrictions, easements, yard setback requirements, or other restrictions to building; AND,
- ii. Shall be identified on the proposed plan of subdivision, AND
- iii. Shall not be subject to material damage by erosion, falling debris, subsidence, or slippage; AND,
- iv. Shall meet the requirements for 'Good Ground' for 'Conventional Residential Development' in NZS: 3604 2011 for standard timber framed buildings, AND,
- v. Exceed a minimum of one metre in height above subsurface groundwater at all times, AND
- vi. Have the ability to achieve compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZCEP:34 2001) for the likely activities on any such allotment.
- vii. For allotments in the Residential and Rural B Zones, shall be located outside the Electricity Transmission Yard.
- viii. Excluding Allotments in the Residential and Rural B Zone, Each allotment shall be able to be provided with a building platform that is not within 20 metres of the centreline of any electrical transmission lines which are designed to operate at or above 110kV.<sup>94</sup>

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<sup>91</sup> S27

<sup>92</sup> S27

<sup>93</sup> S27

<sup>94</sup> S2 Appendix E – Tabled

c. The following are exempted from identifying a Building Platform;

- i. Subdivision to create allotments for the sole purpose of accommodating network utilities, parks and open spaces, and roads;
- ii. Subdivision around existing buildings where no further development will result;
- iii. Applications for boundary adjustments where no additional development will result.

d. The applicant's representative shall certify compliance with the above requirements, and shall include:

- i. A record of the level of consideration and investigations, if any;
- ii. Any constraints on development that do not require specific foundation design;

e. Where ground conditions can not be certified as meeting the above, or where significant works or specific foundation design is required, a supporting geotechnical report from a suitably qualified and experienced professional shall be provided detailing the suitability of the site for the future intended development.

The report shall also outline any restrictions or conditions that may be required prior to the grant of a certificate pursuant to Section 224 of the Resource Management Act and any on-going restrictions after the issue of that certificate.

f. In addition to the above and subject to any other requirement of this Plan,

The design, and any necessary construction, of building platforms shall not result in the diversion of overland flows unless such diversions:

- i. Are discharged into an approved stormwater system; or,
- ii. Approved by way of easements over all properties affected.

**Note: 1. The above requirements are in addition to any requirement placed on development by the provisions of the Natural Hazards and Earthworks provisions of the District Plan and the requirements of Section 106 of the Resource Management Act.**

**2. The onus is on the applicant to demonstrate the site is suitable for development without significant works in the first instance, prior to the issue of subdivision consent.**

**3. Allotments that have been assessed pursuant to the National Environmental Standard for Assessing and Managing Contaminants in**

**Soil to Protect Human Health are deemed to be suitable activities that have been assessed, pursuant to that NES to be acceptable on that land. the matters in which the Standard controls only.**<sup>95</sup>

**R270 Performance Standard - Site serviceability**

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a. Each new allotment shall connect to reticulated water services (sewer, stormwater and water supply) excluding the Rural B zones<sup>96</sup> which shall be required to demonstrate is can provide those services within the proposed allotment.

**Note: For the purposes of this rule, open drains and swales are considered reticulated stormwater services only where owned and maintained by the Wanganui District Council.**

b. Where connections are required, these shall be provided to the allotment boundary in accordance with NZS 4404 2004 and the Wanganui District Council Engineering Document 2012 or alternative approved by way of the Alternative Design Procedure, prior to the issue of a Certificate pursuant 224 of the Resource Management Act.

c. Connections shall be provided underground, except that stormwater connections may be provided above ground where retention or attenuation measures are required or low impact design approaches are to be used.

d. For sites in the Rural B Zone applications shall:

- i. Provide secure suitable non-reticulated levels of service for potable water supply, AND
- ii. Demonstrate the ability to comply with New Zealand Fire Service Fire Fighting Water<sup>97</sup> Supplies Code of Practice 2008 SNZ PAS 4509:2008

**Note: Connections for the discharge of trade waste are managed through the Wanganui District Council Trade Wastes Bylaw 2008**

**R271 Performance Standard - Network utilities**

**Supply – Electricity and Telecommunications**

a. Electricity supply and telecommunications services are required for all development within the urban boundary must be provided to each allotment in the Residential, Rural Lifestyle, Reserves and Open Spaces,

<sup>95</sup> S15

<sup>96</sup> S27

<sup>97</sup> Sub 1 – Tabled

Neighbourhood Commercial, and all Industrial and Commercial Zones, and shall provide a suitable level of service and/or capacity to serve each allotment created by that development.<sup>98</sup>

In the case of power and telecommunications connections, Individual customer connections may be provided above ground where there is an existing overhead supply.<sup>99</sup>

b. In commercial and industrial zones the supply of network utilities<sup>100</sup> shall recognise the operational requirements of the probable occupation and use.

### **Supply – Gas**

c. Provision should be made to ensure that gas and telephone connections can be provided to each urban<sup>101</sup> allotment within the urban boundary<sup>102</sup> unless the network utility operator does not wish to supply that area.

### **Connections**

d. Connections to electricity and<sup>103</sup> telecommunications infrastructure including land line telephone and broadband fibre<sup>104</sup> shall be required in all zones, except excluding<sup>105</sup> the Rural Zone. In urban areas this should be by means of an underground system wherever possible. Within the urban boundary, connections may be above ground only where there is an existing overhead supply.<sup>106</sup>

e. For greenfield subdivision where fibre reticulation is not presently available, red or green ducting shall be installed (both sides of the road) to allow for future fibre installation where the subject site directly adjoins, or is opposite, and connects to existing fibre reticulation.<sup>107</sup>

**Note: Crown Fibre Holdings and<sup>108</sup> UFB Partners may be required to install infrastructure. Developers should discuss the requirements of the subdivision with a representative of the relevant UFB Partner**

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<sup>98</sup> S27

<sup>99</sup> S27

<sup>100</sup> S27

<sup>101</sup> S27

<sup>102</sup> S16

<sup>103</sup> S27

<sup>104</sup> S27

<sup>105</sup> S27

<sup>106</sup> S27

<sup>107</sup> S16

<sup>108</sup> Sub 16 – Tabled

**prior to lodging an application. If fibre is to be included then it should be installed during construction.**<sup>109</sup>

**Design and construction**

f. Design and construction of gas, ~~telephone~~ telecommunication<sup>110</sup> and electricity facilities shall be to the requirements and approval of the respective network utility operators. Design and construction shall recognise the operating access and service requirements of other adjacent utilities.

**Compliance**

e. A compliance certificate shall be provided from the relevant network utility operator, stating that the design and construction of gas, ~~telephone~~ telecommunications<sup>111</sup> or electricity facilities is satisfactory in standard and level of service and that the network utility operator has undertaken to take over operation and maintenance of the facilities at no cost to Council\*.

**R272 Performance Standard - Site access**

- Rights of way and shared access

a. Each allotment and additional dwelling shall be required to be served by legal access to a formed legal road in accordance with the table below:

**Table 1 – Legal accessway width**

<u>Access type</u>	<u>Number of potential household units</u>	<u>Minimum legal width – Metres (m)</u>
<u>Single user</u>	<u>1</u>	<u><del>3.8</del> 3.6<sup>112</sup> m</u>
<u>Shared accesses</u>	<u>1-3</u>	<u><del>3.8</del> 3.6<sup>113</sup> m</u>
	<u>4-6</u>	<u>6.5m</u>
	<u>7 and above</u>	<u>Road</u>

b. For additional dwellings, physical width is an area on a plan identified for access equal to the maximum potential household units for the allotment/s that is clear of buildings and structures, that meets the remaining access requirements of this Plan.

<sup>109</sup> S16

<sup>110</sup> S16

<sup>111</sup> S16

<sup>112</sup> S3

<sup>113</sup> S3

c. The legal width for subdivision, and physical width for additional dwellings, shall be clear of buildings, trees, or any other above ground.

d. Where there is more than one access the legal width requirement can be allocated between each access provided that access retains the ability to comply with this Plan.

ed<sup>114</sup>. The maximum number of household units, and potential household units, which may share a private access shall be no more than 6.

**Note: Potential household units for a site will be calculated by dividing the allotment area by the minimum net site area for the zone less any area subject to physical constraints, easements, and existing or proposed Right of Ways. Where less than a whole number, the next lowest whole number will be used.**

fe<sup>115</sup>. The construction of shared accessways and Rights of Way shall be required prior to the issue of a certificate pursuant to Section 224 of the Resource Management Act 1991<sup>116</sup>, but only<sup>117</sup> for the actual number of dwelling units it shall serve only<sup>118</sup>, except in the Residential Zone that<sup>119</sup> any vacant allotments in the Residential Zone<sup>120</sup> shall be considered as one dwelling unit.

f. For development where a fire appliance is not able to reach either the dwelling or the source of fire fighting water supply from a public road in accordance with the New Zealand Fire Service Fire Fighting Water Supplies Code of Practice 2008 SNZ PAS 4509:2008, the minimum access way width shall be 4m as required under this code.<sup>121</sup>

- Vehicle Crossings

g. Each new allotment shall be serviced by at least one formed vehicle crossing onto a formed legal road.

h. The design and construction of vehicle crossings shall be in accordance with the requirements of NZS 4404 2004 and the

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<sup>114</sup> S27

<sup>115</sup> S27

<sup>116</sup> S27

<sup>117</sup> S27

<sup>118</sup> S27

<sup>119</sup> S27

<sup>120</sup> S27

<sup>121</sup> Sub 1 – Tabled

Wanganui District Council Engineering Document 2012 where Wanganui District Council is the Road Controlling Authority.

**Note: All new or upgraded crossings are required to use the Wanganui District Council Corridor Access Request system, except that this shall not apply where Council is not the Road Controlling Authority.**

**Note: The design, location and construction of vehicle crossings onto State Highways are managed by the New Zealand Transport Agency.**

- h. Where subdivision and land use requires access to State Highways the applicant shall include in their application a written statement from the Road Controlling Authority approving that access to the satisfaction of the Subdivision Engineering Officer.

**Note: The removal of street trees for the purpose of creating a vehicle crossing is not managed by the District Plan. The Parks and Property Department of the Wanganui District Council should be contacted whenever alteration or removal of a street tree is proposed or required.**

- Roads

- i. For the design and construction of roads refer to the infrastructure provisions.

**R273 Earthworks**

In addition to the earthworks land use standards and rules, the following standards also apply for subdivision,

Subdivision in residential zones, earthworks and land modification shall not exceed the removal of topsoil for the purpose of establishing building platforms, construction of roads, and trenching and back filling ancillary to the installation of utilities and services.

Where land is being filled to a level that exceeds 0.56<sup>122</sup>m in depth measured vertically:

- a) The area/s of cut and fill shall be identified on a Plan and As-Built drawings shall be supplied to Council prior to the issue of a Certificate pursuant to Section 223 or the Resource Management Act, and in accordance with the technical requirements of NZS 4404 2010 and the Wanganui District Council Engineering Document 2012.
- b) Where intended to be used as a building platform the fill shall be certified by a suitably qualified engineering professional as being

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<sup>122</sup> S27

suitable to meet the definition of ‘good ground’ required for timber framed buildings in NZS 3604 2011.

**Note: The requirements of the Land Drainage Act 1908 still apply and should be referred to by anyone moving significant amounts of earth or altering overland flows.**

**Note: Persons considering large scale earthworks are advised to contact the Horizons Regional Council. Chapter 12 of the Proposed One Plan may contain additional requirements for large scale earthworks.**<sup>123</sup>

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<sup>123</sup> S11



## Earthworks

### R274 Permitted Activities:

The following are Permitted Activities:

a. Earthworks in the Residential and Rural B Zone and Neighbourhood Commercial Zones<sup>124</sup>, subject to meeting the Performance Standards.

b. Earthworks required for piling, road maintenance or widening, trenching and back filling ancillary to the installation of network utilities and connections to water services and reticulated services.<sup>125</sup>

c. Earthworks for the establishment of water and effluent tanks, effluent disposal fields, domestic gardening and landscaping subject to the finished ground levels remaining the same, where the finished ground levels are the same as prior to works occurring and the establishment of boundary fences.<sup>126</sup>

d. Earthworks required for the formation of an accessway, Road, Right Of Way and vehicle crossings, unless otherwise stated.<sup>127</sup>

e. Earthworks required for the installation of connections to reticulated services and network utilities unless otherwise stated.<sup>128</sup>

f. Earthworks in all other zones, unless otherwise stated.<sup>129</sup>

g. Earthworks associated with the replacement and/or removal of a fuel storage system at a service station as defined by the Resource Management Act (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.<sup>130</sup>

**Note: Works in close proximity to any electricity line or support structure can be dangerous. The Electrical Code of Practice for Electrical Safe Distances 34 : 2001 may apply and should be referred to. This Code is enforced by the Ministry of Economic Development, Business, Innovation and Employment, and compliance is mandatory.<sup>131</sup>**

### R275 Restricted Discretionary Activities:

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<sup>124</sup> S27

<sup>125</sup> S27

<sup>126</sup> S27

<sup>127</sup> S27

<sup>128</sup> S27

<sup>129</sup> S27

<sup>130</sup> S15

<sup>131</sup> S2 and S27

The following are restricted discretionary activities in the Residential Zone

a. Earthworks in the Residential Zone and Rural B Zone and Neighbourhood Commercial Zones<sup>132</sup> that do not comply with a Performance Standard unless otherwise stated.

b. Earthworks required for subdivision development<sup>133</sup>

Council restricts its discretion to the following matters:

1. Discretion will be restricted to the ability of a proposal to meet all the relevant Policies, Performance Standards and Assessment Criteria.

Refer to [Resource Consent Assessment Criteria](#).

#### **R276 Non-Complying Activities:**

The following activities are non-complying activities in the Residential Zone<sup>134</sup>:

a. Earthworks that do not comply with a Performance Standard or Standards that specifically states failure to meet that standard is a Non-Complying Activity.

**Note: Quarrying is excluded from the provisions of this section.**

Refer to [Resource Consent Assessment Criteria](#).

Performance Standards

#### **R277 Performance Standards - Residential Zone and Rural Lifestyle Zone only Scale of Earthworks<sup>135</sup>:**

a. Earthworks in the Residential, Rural B, and Neighbourhood Commercial Zones shall not exceed the following:<sup>136</sup>

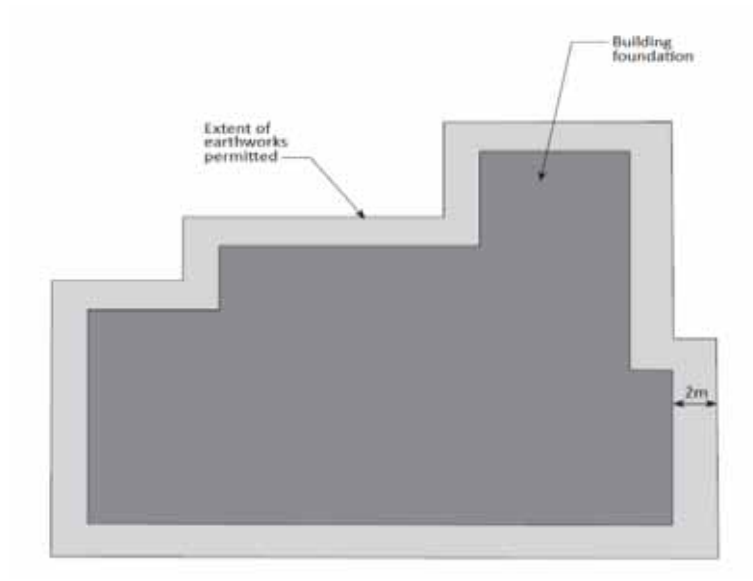
ai<sup>137</sup>. Earthworks shall not exceed what is required for the establishment of building foundations, boundary fences, and the formation of the initial accessway subject to the excavations not<sup>138</sup>

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<sup>132</sup> S27  
<sup>133</sup> S27  
<sup>134</sup> S27  
<sup>135</sup> S27  
<sup>136</sup> S27  
<sup>137</sup> S27  
<sup>138</sup> S27

exceeding the extent of foundations by a maximum of 2 meters measured horizontally in accordance with Diagram 1.

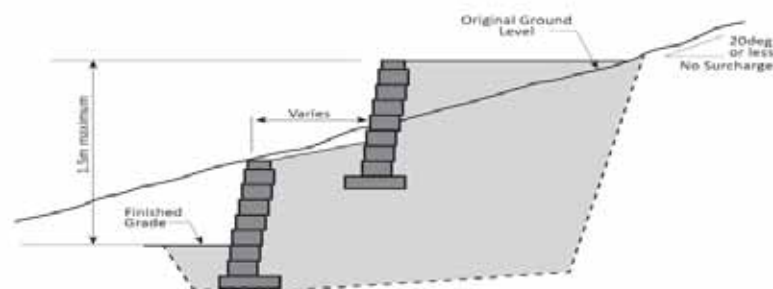
Diagram 1



b. ii. Subject to (a) above, e<sup>139</sup> Earthworks that do not exceed the lesser of up to and including<sup>140</sup> 50% of the area of the site<sup>any</sup> allotment, or up to a maximum area of<sup>141</sup> 500m<sup>2</sup>. This is measured cumulatively across the subject site or sites of works. Where there is more than one allotment are subject to works as part of a development project, the area of works shall be calculated cumulatively across those allotments affected.<sup>142</sup>

eiii. The erection of retaining walls shall not either singularly or cumulatively, exceed 1.5 metres in height. Refer to Diagram 2

Diagram 2



<sup>139</sup> S27

<sup>140</sup> S27

<sup>141</sup> S27

<sup>142</sup> S27

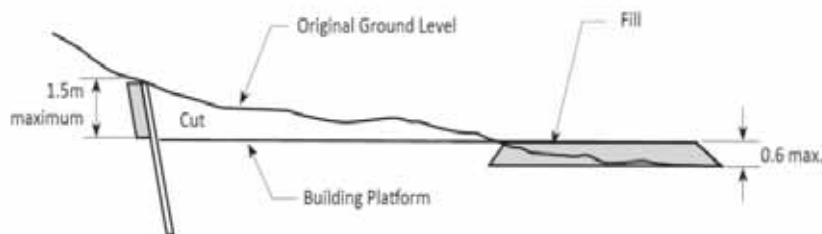
**Note: Earthworks associated with rural activities including tilling, harvesting, planting, ploughing, regrassing, or similar activity in the Rural B Zone are exempt from the above provisions.**<sup>143</sup>

**R278 Performance Standard – General (Due to phased District Plan Review applies only to Residential Zone and Rural Lifestyle Zone only) Earthworks Standards**<sup>144</sup>

**1. The following standards apply to earthworks in all zones except that provision 1(a) to 1(e) shall not apply to the Rural Zone:**<sup>145</sup>

**a. Cuts shall not exceed 1.5 metres in height and fills below building platforms shall not 0.6 metres in depth measured vertically. Refer to Diagram 3**

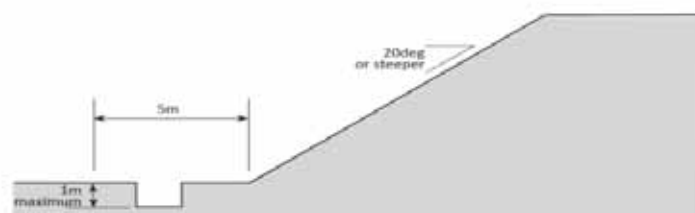
Diagram 3



**b. Cuts or fills shall not occur on slopes exceeding 20°.**

**c. Cuts of greater 1.0 metre in height measured vertically shall not occur within 5.0 metres if a toe of a slope exceeding 20°. Refer Diagram 4**

Diagram 4



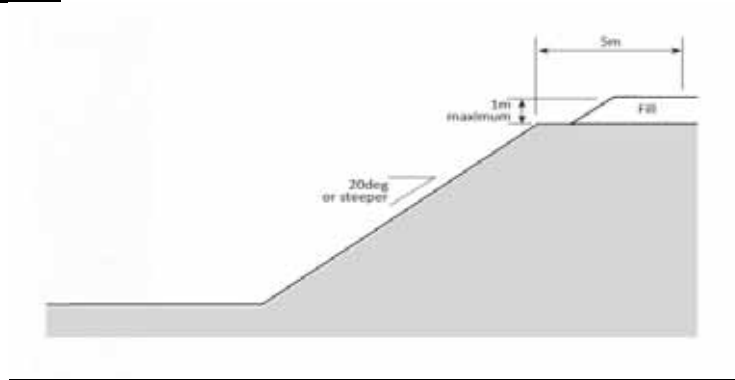
**d. Fills greater than 1.0 metre in height measured vertically shall not occur within 5 meters of the top of a slope exceeding 20°. Refer Diagram 5**

<sup>143</sup> S27

<sup>144</sup> S27

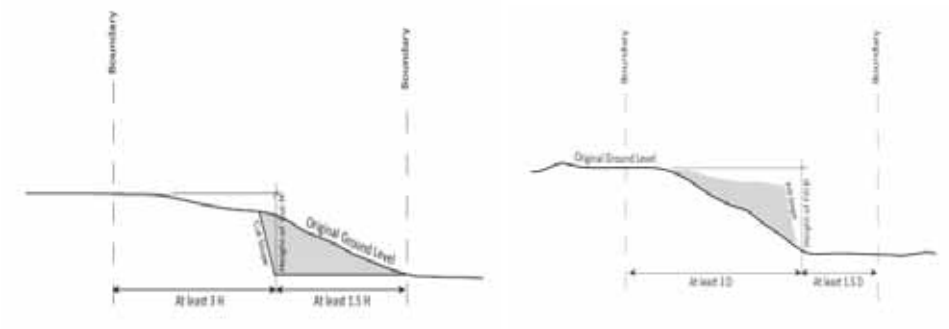
<sup>145</sup> S27

Diagram 5



e. The toe of a fill or cut slope shall be at least 3 times the depth/height of the slope from an upslope boundary and at least 1.5 times the depth/height of the slope from a downslope boundary. Refer Diagram 5 6<sup>146</sup>

Diagram 5-6<sup>147</sup>



f. Works Earthworks<sup>148</sup> shall not<sup>149</sup>

i.<sup>150</sup> result in visible evidence of settled dust beyond the boundaries of the subject site to which the works relate.

a. Any earthworks shall not<sup>151</sup>

ii.<sup>152</sup> alter overland flow paths, including swales and low impact stormwater devices, in a manner that causes damage to property through inundation, erosion, or subsidence.

h. Any earthworks shall not<sup>153</sup>

iii.<sup>154</sup> cause excessive vibration on surrounding sites.

<sup>146</sup> S27  
<sup>147</sup> S27  
<sup>148</sup> S27  
<sup>149</sup> S27  
<sup>150</sup> S27  
<sup>151</sup> S27  
<sup>152</sup> S27  
<sup>153</sup> S27  
<sup>154</sup> S27

~~i. Any earthworks shall not~~<sup>155</sup>

iv. create, encourage, or exacerbate erosion or instability.

~~i. There shall not be any~~<sup>156</sup>

v.<sup>157</sup> discharge any materials such as soils, sediment or vegetation into reticulated infrastructure or onto roads as a result of earthworks. Non compliance with this Standard shall be deemed a Non-Complying Activity.

~~kgvi.~~<sup>158</sup> Construction noise from a site in any zone shall not exceed the limits recommended in, and shall be measured and assessed in accordance with, NZS 6803:1999 Acoustics Construction Noise.

**Note: The requirements of the Land Drainage Act 1908 still apply and should be referred to by anyone moving significant amounts of earth or altering overland flows.**

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<sup>154</sup> S27

<sup>155</sup> S27

<sup>156</sup> S27

<sup>157</sup> S27

<sup>158</sup> S27

## **Infrastructure**

### **R279 Subdivision engineering basis**

Subdivision and infrastructure design and construction shall be in accordance with NZS: 4404 2004 and the Wanganui District Council Engineering Document 2012 (the Engineering Document). Where there is conflict between NZS 4404 2004 the Engineering Document prevails. The provisions in the District Plan shall prevail over both NZS 4404 2004 and the Engineering Document.

**Note: The subdivision process is required to take an integrated approach to the development of infrastructure and land uses to achieve good urban design outcomes. The General Urban Design Criteria, General and infrastructure specific Assessment Criteria and the relevant Zone provisions should not be seen in isolation but should be read in conjunction with each other.**

### **R280 Servicing capacity**

Where there is not sufficient capacity in the servicing catchment to provide the specified levels of service required the subdivider shall, at their own cost, undertake to provide that capacity to provide for their proposed development, or provide a suitable alternative solution.

1. Where subdivision occurs within any reticulated servicing catchment for water, wastewater, or stormwater and there is not sufficient capacity to meet the specified level of service, or the ability of that infrastructure catchment to provide that level of service to the remaining area of developable land within that catchment is reduced:

The subdivider shall,

- a. be required to provide that level of service for their development at their own cost; AND,
- b. only be allocated an equitable proportion of existing servicing capacity based on land area, unless;

Where additional capacity is available in an infrastructure catchment in excess of what is required to provide the specified level of service for the remaining areas of developable land, this may be allocated subject to approval from the Manager, Infrastructure Services.<sup>159</sup>

### **R281 Consideration of Alternative Solutions**

- a. Alternative infrastructure solutions to those in NZS:4404 2004 and the Wanganui District Council Engineering Document 2012 shall be required to use the Alternative Design Procedure.

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<sup>159</sup> S27

**Note: It is recommended that where a subdivision layout is based upon an alternative design that the applicant engages with Council and Asset Managers at the earliest possible opportunity for discussions around concept and design approval.**

### **R282 Easements**

a. Infrastructure that is to be vested in Council shall be provided with easements in accordance with NZS 4404 2004 and the Wanganui District Council Engineering Document 2012.

### **R283 Catchment Management Basis**

a. The design, construction and operation of stormwater, water, and wastewater infrastructure to be vested in council or where it will connect to Council owned infrastructure<sup>160</sup> shall take a whole of<sup>161</sup> catchment based approach and shall meet the following requirements:

- i. New infrastructure shall be adequate to meet the maximum potential demand arising from the development the allotments, including future land uses as anticipated by the District Plan.
- ii. Proposals shall identify any downstream works required to cater for the anticipated use of the allotments.

### **R284 Transport**

a. Any applications for subdivision shall not include the creation of segregation strips or any other mechanism that:

- i. Prevents access to any existing road or public pedestrian or cycle accessway, or;
- ii. Prevents connectivity or<sup>162</sup> connections to a proposed road in the Springvale Indicative Future Development Area, or;
- iii. Prevents land zoned for residential development from being developed to its anticipated potential;
- iv. The above does not apply where the ~~R~~<sup>163</sup>oad ~~C~~<sup>164</sup>ontrolling aAuthority requires access to a road or public pedestrian or cycle accessway to be prevented for health and safety purposes, or where access would adversely affect the purpose of a road or public pedestrian or cycle accessway.

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<sup>160</sup> S27

<sup>161</sup> S27

<sup>162</sup> S27

<sup>163</sup> S27

<sup>164</sup> S27



- b. Roading Hierarchy

i. All new roads shall be designed, constructed, and operate in accordance with its intended function within the Roading Hierarchy as shown in the District Plan Maps.

ii. Where new roads are not shown in the Roading Hierarchy the road design shall be clearly appropriate to its intended function within the overall roading network.

iii. Roading layouts shall generally give effect to the Indicative Roading layouts as shown on the Plan Maps.<sup>165</sup>

- c. Roading and stormwater

No road reserve shall be used as a secondary flow path, for attenuation or detention, or for low impact stormwater treatment unless approved by the Road Controlling Authority.

- d. Connectivity

An indicative future roading layout shall be identified on the plan of subdivision that identifies connections to existing or potential future road and cycle and pedestrian accessways that can comply with the provisions of this Plan

e. Frontage to Public open space

Public open space should be prominent and accessible, with a minimum of 40% of the length of the boundary having direct road frontage.

- f. Cycle and pedestrian accessways

Where pedestrian and/ or cycle accessways are required, they shall be formed and comply with the following requirements:

i. All pedestrian and cycle accessways shall be vested in Council.

ii. Be a minimum of 6.4<sup>166</sup> metres in width for its length.

iii. Have suitable lighting at each entrance.

iv. Where exceeding 60 metres in length, accessways shall be lit at intervals not exceeding 30 metres.

v. Have a direct line of sight from each access point to the point of egress.

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<sup>165</sup> S27

<sup>166</sup> S27

vi. Be secured at any entrance that has direct road access by bollards or other approved devices to prevent motor vehicles entering public spaces.

- g. Cul de sac roads

The following are specific requirements for the use of cul de sac roads in proposed subdivision layouts:

i. Cul de sac roads shall not exceed 150 metres in length measured from the centreline of the roads intersection with the feeder road and the head of the cul de sac road.

ii. A cul de sac shall not gain access off another cul-de-sac or terminating road unless there is no other physical or practical means of developing the related land.

iii. A cul de sac shall, at the terminating head, provide an accessway for cycling and pedestrian access that:

a. Connects to another existing or proposed road, cycleway, or public open space, public facility or neighbourhood commercial zone, Or;

b. That reduces travel time to cycleway, or public open space, public facility or neighbourhood commercial zone, And;

c. Is located in the most efficient location to achieve the above.

**Advice note: For (g) (i) and (ii) above, ‘no practical and physical means’ refers to constraints regarding topography, ground conditions and existing roading and development layouts. This does not include land in different ownership.**<sup>167</sup>

- h. Street lighting

i. Street lighting shall be provided on new road reserve to ensure the safety of road users and pedestrians in accordance with NZS 4404 2004 and the Wanganui District Council Engineering Document 2012.

ii. All new street lighting fixtures shall:

a) be designed installed and maintained to minimise glare upright and spill onto properties,

b) use energy efficient lamps

c) be of a standard design and construction.

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<sup>167</sup> S21 and FS1

- i. Entranceway features

All permanent entranceway features and/or structures for the purpose of promoting or branding a subdivision name shall be located entirely within private property and not within road reserve.

- j. Footpaths

Road and/or pedestrian connections between the land being subdivided, existing roads, adjoining properties, and balance lots shall be provided in accordance with NZS 4404 2004 and the Wanganui District Council Engineering Document 2012.

- k. Site frontage

The total number of allotments with no direct access onto road reserve including those with shared access with no frontage and rear allotments using access legs shall not exceed 20% of the lots in any one greenfield subdivision application.

- l. Landscaping

Landscaping shall be in accordance with the requirements of the road controlling authority. In the case of road reserve being vested in the Wanganui District Council this shall be in accordance with the Wanganui District Council Tree Policy 2008.

**R285 Stormwater**

a. Subdivision to create new stormwater infrastructure shall not require additional mechanical pumping stations.

b. Post development stormwater run off rates shall not exceed those prior to development in catchments required to achieve hydraulic neutrality.

~~c. New wastewater infrastructure shall not discharge stormwater into the wastewater network.~~ New stormwater infrastructure shall be designed and constructed to a standard that ensures stormwater is not discharged into the reticulated wastewater system.<sup>168</sup>

d. The design capacity of any piped stormwater facilities shall be sufficient to accommodate the surface water flows resulting without relying on secondary flowpaths in accordance with the Table 1 below.

Table 1 Stormwater Design Requirements

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<sup>168</sup> S27

<u>Function</u>	<u>Annual Exceedance Probability (AEP %)</u>	<u>Return Period (years)</u>
<u>Primary Systems –</u>		
- <u>Rural</u>	<u>20</u>	<u>5</u>
- <u>Residential and rural residential areas</u>	<u>10</u>	<u>10</u>
- <u>Commercial and industrial areas</u>	<u>1</u>	<u>100</u>
- <u>All areas where no secondary flow paths are available</u>		
<u>Secondary systems</u>	<u>1</u>	<u>100</u>

e. Secondary overland flow paths must cater for a minimum of a 1% AEP storm event. Where this is not feasible, the piped system must perform that requirement.

**Note: All discharges will need to meet the requirements of the Regional Council, including any relevant conditions of any applicable consent.**

- f. Low impact stormwater treatment
  - i. Stormwater management and treatment shall avoid significant modification to natural drainage system and overland flow paths.
  - ii. Where low impact stormwater approaches including swales, rain gardens, and other mechanisms are proposed or required, these shall:
    - a) Be required to be approved by the Alternative Design Procedure, excluding the construction of the swale in the Springvale Indicative Future Development Area.
    - b) Meet the same performance requirements of conventional infrastructure.
- g. Parks and reserves

Areas to be vested in Council that are set aside for the purpose of accommodating stormwater flows shall not offset or replace any requirement for recreation reserves.

**R286 Water**

a. Water supply shall meet the requirements of the Ministry of Health: Drinking Water Standards for New Zealand 2005 as updated in 2008.

b. In the Residential Zone fire fighting supply shall be provided in accordance with the New Zealand Fire Service Fire Fighting Supplies Code of Practice 2008 SNZ PAS 4509:2008.

**R287 Wastewater**

~~a. Applications for subdivision shall not include the development of new wastewater infrastructure that requires the installation of additional pump.<sup>169</sup>~~

~~b. a. Wastewater systems shall not provide for the direct discharge of stormwater into the reticulated system.~~

**Note: All discharges will need to meet the requirements of the Regional Council, including any relevant conditions of any applicable consent.**

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<sup>169</sup> S3, S8, S23, and FS1

## **SR1 — The Subdivision Process**

### **Meaning of subdivision**

Part X (Sections 218 to 246) of the Resource Management Act 1991 specifies the statutory requirements and procedures for subdivisions and reclamations. It should be noted that Section 218 defines the term “subdivision of land” to include all forms of division of an allotment, including cross-lease, unit title and company lease, as well as freehold subdivision. Subdivision is not confined to situations when more allotments are being created. The term applies also to boundary adjustments (where the number of allotments stays the same) and amalgamations of allotments into larger units.

### **Subdivision consent**

In accordance with the rules in this section, and Section 11 of the Resource Management Act 1991, all subdivisions require a resource consent (subdivision consent) from the Council. Information Requirements (IR4) – Subdivision Consents sets out the information requirements for applications for subdivision consent.

### **Approval of survey plan**

Where a subdivision consent is granted, the next step is for a survey plan to be prepared and submitted for Council approval pursuant to Section 223 of the Act. This step ensures that the survey plan conforms with a subdivision consent which has not lapsed (2 years unless specified otherwise in the consent).

### **Deposit of survey plan**

The survey plan shall not be deposited under the Land Transfer Act 1952 until Council has certified pursuant to Section 224 of the Act that all conditions of the subdivision consent have been complied with or, where not yet complied with, that completion certificates or consent notices have been issued. The plan must be deposited

~~within three years of being approved pursuant to section 223 of the Act.~~

~~After the deposit of survey plans, the provisions of the Land Transfer Act 1952 apply and this culminates in due course with the issue of the Certificates of Title.~~

### ~~**Negotiation and vesting of utility infrastructure**~~

~~The subdivider must resolve ownership issues with all utility operators, including vesting of infrastructure and the creation of appropriate easements.~~

## ~~**SR2 Activity Status**~~

~~The rules for each zone specify, whether subdivision is a:~~

- ~~● controlled activity~~
- ~~● discretionary activity; or~~
- ~~● non-complying activity~~

~~Where subdivision is a controlled activity, the standards in SR3 – Subdivision Standards shall apply. Where the standards are not met, the subdivision becomes a discretionary activity.~~

## ~~**SR3 Subdivision Standards**~~

~~The following standards and terms shall apply to subdivision that is a controlled activity. Applications for subdivisions that are a discretionary or non-complying activity shall be assessed against the criteria contained in Assessment Criteria, (particularly C1 – General Criteria and C6 – Subdivision. The extent (or degree) to which such applications comply (or do not comply) with the following standards for controlled activities shall also be used as a guide in assessment.~~

### ~~**Allotment size**~~

- ~~\_\_\_\_\_ a. The minimum allotment size in the Rural Zone is 1 hectare, except that this shall not apply to allotments required for network utility activities.~~
- ~~\_\_\_\_\_ b. In all other zones, allotments shall be of sufficient size and shape to contain an activity or development in a manner that complies with the rules and standards for the zone concerned.~~
- ~~\_\_\_\_\_ c. In all zones where there is no sewerage or stormwater reticulation, allotments shall be of sufficient size to enable the treatment and disposal of sewage and stormwater in an environmentally acceptable manner within lot boundaries. This is where the treatment and disposal of sewage and stormwater does not, or will not, either on its own or cumulatively, lead to adverse environmental or health effects either within or beyond the boundaries of the site (including ground or surface water contamination, odours and surface run-off from land). Regard shall be had to the proposed use of the land, and the size, shape and soil characteristics of the land.~~

~~\_\_\_\_\_ **Existing buildings**~~

- ~~\_\_\_\_\_ d. Where any land to be subdivided contains existing buildings, there shall be no increase in the degree of non-compliance with any permitted activity standard for the zone concerned.~~

~~\_\_\_\_\_ **Hazard potential**~~

- ~~\_\_\_\_\_ e. Each allotment shall be able to be provided with a building platform, and access to that platform, for a dwelling or other intended building. The building platform and access to that platform shall not be subject, or likely to be subject, to material damage by erosion, falling debris, subsidence, slippage or inundation from any source.~~
- ~~\_\_\_\_\_ f. Each allotment shall be able to be provided with a building platform that is not within 20 metres of the centreline of any electrical transmission lines which are designed to operate at or above 110kV.~~



- ~~g. Where subdivision of unstable land is proposed the title of that land shall be covenanted to ensure that the allotment is not intended to be used for any building.~~

### ~~Access~~

- ~~h. Each allotment shall be provided with practical, legal access to a formed legal road (or to a proposed road that is to be formed as part of the subdivision) in a manner that complies with the access rules in General Rule Transportation (Rule R24).~~
- ~~i. Any new access created to a sealed road shall be sealed from the edge of road seal to the property boundary.~~

~~**Note:** A Limited Access Road (LAR) is deemed by Section 93 of the Transit New Zealand Act 1989 not to be a road for the purposes of obtaining access in relation to a subdivision. Accordingly, unless the Minister of Transport gives special authorisation, land adjoining a Limited Access Road cannot be subdivided unless legal frontage to an alternative road is provided.~~

### ~~Subdivision adjacent to waterways~~

- ~~j. Subdivision or road stopping adjacent to the Whanganui River, Mangawhero River or the Coast is deemed to be a restricted discretionary activity, not a controlled activity. Refer to SR6 Esplanade Reserve and Strips.~~

### ~~General rules~~

- ~~k. Subdivisions shall comply with the General Rules of this Plan to the extent that they are applicable. In particular, rules in the following plan sections apply:~~

~~Rule R17 Natural and Cultural Heritage Resources~~

~~Rule R18 Protected Trees~~

~~Rule R19 Riparian Margins~~

~~Rule R24 Transportation~~

## ~~SR4 Matters Over Which Council Has Reserved Control~~

~~In granting consent to subdivisions that are a controlled activity, the Council has reserved control over:~~

- ~~a. Subdivision layout
  - ~~● allotment sizes~~
  - ~~● site dimensions~~
  - ~~● boundary positions~~
  - ~~● easements~~~~
  
- ~~b. Provision of infrastructure and services
  - ~~● roading~~
  - ~~● water supply~~
  - ~~● wastewater disposal~~
  - ~~● stormwater control~~
  - ~~● earthworks (cut and fill)~~
  - ~~● energy supply (electricity and/or gas)~~
  - ~~● telecommunications~~
  - ~~● streetscape and landscaping~~~~
  
- ~~c. Provision of reserves
  - ~~● local purpose~~
  - ~~● recreation~~
  - ~~● esplanade reserves/esplanade strips/access strips~~
  - ~~● other reserves~~~~
  
- ~~d. Suitability of sites
  - ~~● access~~
  - ~~● building platforms~~
  - ~~● flood control and hazard mitigation~~~~
  
- ~~e. Preservation of places or items of natural or cultural heritage value or amenity value.~~
  
- ~~f. The imposition of financial contributions~~

- ~~g. Any matters relating to compliance with subdivision standards and terms.~~
- ~~h. Riparian management measures
  - ~~● protection of existing vegetation~~
  - ~~● fencing and planting~~
  - ~~● ongoing management of riparian margins~~~~

## ~~SR5 Performance Criteria for Infrastructure and Services~~

~~In exercising control over the “provision of infrastructure and services” (refer to SR4 (b) the Council will seek to ensure that subdivisions meet the performance criteria outlined in Appendix A7 entitled “*Subdivision Performance Criteria*”.~~

~~The Council will prepare a document, entitled the “*Wanganui Subdivision Code of Practice*” which will be completely separate from, and will not form part of, the District Plan. This document will:~~

- ~~● contain a copy of the District Plan’s “Subdivision Performance Criteria” (Appendix A7; and~~
- ~~● provide a detailed “means of compliance” which meets the District Plan’s “Subdivision Performance Criteria”; and~~
- ~~● list the New Zealand Standards and other standards from which the “means of compliance” has been derived;~~
- ~~● outline documentation required at design, “as built” and completion stages.~~

~~The “acceptable solution” provided will be just one of a range of possible methods of compliance. Applications which meet the District Plan’s “*Subdivision Performance Criteria*” by other means, which have been fully researched and documented, will be approved.~~

# Assessment Criteria

## SPC 1 Transport Infrastructure Assessment Criteria

### Performance goal

~~To ensure the efficient and safe passage of vehicles and pedestrians, on roads and into adjoining property in a manner which is supportive of the land-use environment, and provides space for the facilities of all network utility operators.~~

~~To meet the Performance Goals, the following criteria shall be considered, and addressed:~~

### Design qualities

1. Transport corridors that are designed, constructed and maintained in a manner that:

- a) Is integrated with, and appropriate for, proposed or existing land uses.
- b) Provides safe and liveable places for living, working, and playing.
- c) Promotes connectivity, is highly permeable, and minimises travel distance.
- d) Provides visual amenity through appropriate layouts and landscaping
- e) Provides efficient and safe access to work, living, and recreational spaces
- f) Enables and provides for the functional requirements of network utilities.
- g) Promotes positive community interaction.
- h) Provides for meaningful choice in the mode of movement.
- i) Is consistent with the Wanganui District Roading Hierarchy and the Wanganui Urban Transport Strategy.
- j) Is accessible by all.
- k) Complements existing topographical features.

### Design performance

#### 1. Passage

Road Reserve widths shall be adequate to cater for all anticipated requirements inclusive of vehicle movements, cycle traffic, pedestrian traffic, vehicle parking, network utility operators, and landscaping. Road designs shall encourage vehicles speeds which are consistent with that which is desirable having consideration of

the proposed level and type of activity and land uses being served and the physical environment in which they are located.

*Reason*

~~To permit the free passage of traffic, without unreasonable conflict, delay or obstruction, and the full servicing of all property along the road. To ensure that vehicle speed is complementary to the surrounding environment.~~

## **2. Safety**

Road designs shall allow for the interaction of all road users and road usages to ensure that safety is maximised. Designs shall incorporate an adequate system of artificial lighting which is appropriate to its location so as to maintain safety through periods of darkness, avoid entrapment spaces, and promoted community safety through casual surveillance where adjoining accessways, public open space, and streets.

*Reason*

~~To ensure that the safety and convenience of road users, pedestrians, property occupants and property are not at risk as a result of road design.~~

## **3. Access**

The roading network shall provide vehicular access to all residential properties, goods and services access to all commercial properties and an appropriate level of heavy transport access to all industrial properties. Emergency services access shall be maintained to all areas. Discrete accessible footpaths shall be provided, ~~unless it cannot be justified on the following grounds:~~

- ~~a. the density of development\* is low~~
- ~~b. the density of the surrounding development\* is low~~
- ~~c. the topography precludes the provision of a discrete accessible footpath.~~

*Reason*

~~To ensure that the full potential and convenience of the properties serviced by the road can be realised.~~

## **4. Parking**

The roading proposal shall provide adequate parking both on and off the carriageway to cater for reasonable levels of residential, commercial and visitor parking, which will be required both as a consequence of land development and of access to other adjacent

land areas which are, or might reasonably be expected to be, developed.

*Reason*

~~To enable property within, or adjacent to the development, to function to its full potential, without unreasonably inhibiting passage, access, or safety on the road.~~

**5. Function**

The road\* design shall be clearly appropriate to its intended function within the overall roading network in accordance with the Roding Hierarchy in the District Plan and the Wanganui Urban Transport Strategy, while taking into account adjoining land uses and the surrounding environment.

Where required, roads may form part of the stormwater management system. Roads should also promote community interaction, and provide a sense of place.

*Reason*

~~To ensure that local residential roads are used for access rather than for through traffic, and that through traffic is encouraged to use the appropriate routes in the road hierarchy.~~

**6. Streetscape**

In addition to being functional and safe, the road design shall aesthetically enhance and complement the land development through landscaping and street furniture and encourage community interaction and promote liveability. Streetscape should recognise the role of the road in the Roding Hierarchy in the District Plan, the existing or proposed surrounding uses, and the surrounding environment.

*Reason*

~~To ensure that the road enhances the function of the developed land area, rather than intruding into it as an unrelated feature.~~

**7. Drainage**

The road\* design shall include provision for a low maintenance formalised stormwater drainage system which ensures that all trafficable areas, parking areas or pedestrian walkways are kept free of surface water in accordance with the Stormwater Performance Criteria and maintain a safe operating surface. Road Reserve may be used for attenuation, detention, as a secondary flowpath, by way of swale or other mechanism only where required and approved by the road controlling authority and the stormwater asset manager. Drainage shall be in accordance with the requirements of the stormwater provisions in this Plan.

~~Reason~~

~~To ensure that the road remains functional to the degree appropriate for all weather conditions, for road users and emergency services.~~

**8. Economic life-cycle costs**

Road design shall provide a level of service which is appropriate to the District in general and the designated standard of the immediate area in particular, but which minimises the overall life-cycle costs. Life cycle costs shall include capital, finance, maintenance and rehabilitation cost. For the purposes of this criterion the life-cycle shall be taken as no less than 25 years. Maintenance through this period shall be those activities involved in a reasonable level of road\* reinstatement, and not include capital works.

~~Reason~~

~~To ensure an appropriate level of economic design which does not subsequently create a disproportionate burden on the road users and/or ratepayers.~~

**9. Compliance with other policy**

Road design shall identify and provide for the outcomes arising from other relevant policy from the future road controlling authority. This shall include the following documents:

- The Wanganui Urban Transport Strategy
- Shared Pathways Strategy
- Wanganui Cycling Strategy
- Cycling Implementation Plan
- Wanganui District Council Tree Policy 2008

**10. Urban design**

All subdivision and infrastructure where new roads and accessways are required and/or created shall be assessed against the proposals ability to achieve the following;

a. The design and layout of roading, footpath patterns, and layout of allotments retains and integrates the natural cultural, historical, topographic characteristics and other unique features of the area of the site and the design and layout of any adjoining urban areas.

b. Road and/or pedestrian and cycle connections are provided between the land being subdivided, existing roads, adjoining properties and balance lots, unless unreasonably constrained by topography.

c. An indicative future roading layout shall be identified on the plan of subdivision that identifies and promotes connections to existing or potential future road and cycle and pedestrian accessways that can comply with the provisions of this Plan

d. Public open space is accessible prominent and accessible, with a minimum of 40% of the length of the boundary having direct road frontage.

e. Pedestrian and/ or cycle accessways are located in the most direct and efficient location practicable.

f. Discrete accessible footpaths, accessways and cycleways are provided provided, unless one or more of the following apply:

i. the intended density of *development*\* is low and not affordable for the community, AND/OR;

ii. the intended density of the surrounding *development*\* is low, AND/OR;

iii. the topography precludes the provision of a discrete accessible footpath, AND;

iv. No pedestrian or cycle link has been identified as being required in the Shared Pathways Strategy 2012, Cycling Strategy, Cycle Implementation Plan, or the Wanganui Urban Transport Strategy.

g. Landscaping provides suitable high quality amenity in accordance with the Wanganui District Council Tree Policy 2008.

h. Specimen trees are an appropriate species and planted in location that does not interfere with or damage underground or above ground infrastructure. Vegetation proposed to be planted in close proximity to electric lines should be selected and located in a manner that will not result in vegetation breaching the Electricity (Hazards from Trees) Regulations 2003.

i. Street furniture is provided in a manner that promotes a high amenity urban space, community interactions, safety, and promotes a sense of place that is consistent with the adjoining uses and function of the road in the Roding Hierarchy.

j. Adequate and coordinated space for network utility services, in accordance with the requirements of the operators.



## **SPC 2 Water Supply Infrastructure Assessment Criteria**

### **~~Performance Goal~~**

~~To ensure a secure and reliable supply of water for the purposes of firefighting and potable water for consumption. The goal is to apply equally to existing supply areas and the new areas created by subdivision, all at the lowest total lifecycle cost. In all circumstances the system shall promote public health and wellbeing, and shall be appropriate to the type of development and use.~~

~~**Note:** Water supplies for agricultural use are outside this code.~~

### **~~Performance Criteria~~**

~~To meet the Performance Goal the following criteria shall be considered and addressed. None of these criteria shall justify a level of service which is inferior to that provided to existing properties of a comparable use, or is inconsistent with the service levels required for the specific zone.~~

### **Design qualities**

1. The water supply system shall be designed, constructed and maintained in a manner that:

- a. Safeguards people from illness caused by infection from contaminated water
- b. Safeguard against injury or property damage arising from the operation of the system
- c. Safeguard people from loss of amenity arising from a water supply that is offensive in appearance or odour
- d. Provides adequate quantity and quality of supply of potable water for the reasonably foreseeable consumption, health and hygiene needs of people
- e. Conserves water by avoiding leaks and, where practicable, the use of water
- f. Provides adequate water supply for fire fighting in urban areas
- g. Contains sufficient storage for security of supply
- h. The upstream catchment is provided for and the downstream network has the capacity to provide for anticipated development

### **Design Performance**

#### **1. Quality**

New components connected to the water supply in the urban water network, shall be capable of providing potable water to the point of

connection for users at a quality grading of not less than Bb, complying with the requirements of public health standards and the City's asset management plan for the public water supply. Network water supplies to dwellings outside the urban water network shall provide water of quality which meets the appropriate drinking water standard.

*Reason*

~~To promote public health by providing access to a supply of drinking water for all dwelling units and occupied buildings.~~

## **2. Quantity**

The water supply shall have the capacity to service the anticipated demand at adequate flow and pressure. For a reticulated supply the following shall be achieved:

- maximum working pressure - 90 m
- minimum working pressure at peak flows - 30 m
- minimum working pressure under firefighting flows - 15 m
- minimum available flow at point of supply - 15 litres per min.

A reticulated system shall provide both:

- flows equivalent to the Fire Service Code of Practice flow requirements plus two thirds of the peak daily consumption flow, and
- peak daily demand.

Peak daily demand for design shall be 1000 l/head/day.

The population served shall be based on not less than 3 persons per dwelling. Where *dwelling unit*\* density is not known, population may be based on 60 persons per hectare.

Industrial and commercial demands shall be specifically analysed for known or potential usage.

*Reason*

~~To meet the reasonable expectations that water be available on demand at a flow and pressure which meets the requirements of domestic, commercial or industrial requirements. To ensure that non-potable substitute supplies are not inappropriately adopted, or measures used to boost supply to the detriment of other users.~~

## **3. Firefighting**

The water supply shall satisfy appropriate fire protection standards and maintain access for firefighting.

*Reason*

~~To protect life and property from effects of fire by ensuring adequate water supplies are located in the manner necessary to ensure firefighting needs are successfully met.~~

#### **4. Storage**

The water supply system shall have adequate storage capacity to allow for consumption as well as firefighting purposes, and to provide reserve supply for the calculated requirements of users.

~~*Reason*~~

~~To ensure supply remains even in the event of interruption of supply during peak demand and / or emergency conditions by providing reserve capacity. Continuity of supply is important to ensure the public health requirement for potable water is always met and that firefighting capacity remains available.~~

#### **5. Economic life cycle costs**

Water supply systems shall be designed in a way which, while meeting other criteria, minimises the overall life-cycle costs inclusive of capital, operating, maintenance and rehabilitation costs. For the purposes of this criterion, the life-cycle shall be taken as no less than 25 years.

~~*Reason*~~

~~To ensure an appropriate level of economic design, that does not subsequently create an undue burden on ratepayers.~~

#### **6. Compatibility and durability**

The water supply system shall use safe and durable materials which are compatible with Council's\* existing water supply systems and Schedule of Approved Materials. The system shall be constructed to prevent leakage and potable water contamination and to withstand anticipated pressures and loads.

~~*Reason*~~

~~To minimise the maintenance and replacement component of total lifecycle costs while providing long term performance. A consistent form of construction of water supply systems allows replacement components to be available and ensures that knowledge, expertise~~

~~and equipment is available to make prompt repairs in the event of failure.~~

## **7. Maintainable**

Water supply systems shall be positioned so as to be easily located, provide reasonable access for maintenance and be constructed in a manner that enables easy isolation and replacement / repair of faults

### *Reason*

~~To ensure access to the system and the system itself is arranged so as to enable preventative and remedial maintenance to be carried out swiftly to ensure continuity of supply without major disruptions to the roadscape.~~

## **8. Security**

The water supply system shall have adequate valves, meters, alarms, looped pipe systems or other emergency provisions to minimise the risk and extent of loss of service, or contamination of supply due to failure, or to maintenance requirements.

### *Reason*

~~To ensure continuity of supply which is important to maintain the availability of safe drinking water and firefighting capacity. Components within the system should be provided which allow supply to be maintained in the event of failure or maintenance of parts of the system.~~

## **Monitoring**

The water supply system shall include adequate facilities for monitoring of system operation as part of management of the supply or for measurement of supply for charging. The monitoring system shall be compatible with the Council's\* preferred current system of monitoring.

### *Reason*

~~To ensure that monitoring of system performance allows defects such as leaks or mechanical failure to be detected and corrected. Monitoring also provides information on consumption trends for sound management of the assets and of demand and allows for equitable charging to promote management of demand by water users.~~

## **SPC 3 Wastewater Infrastructure Assessment Criteria**

### **Performance goal**

~~To collect, treat and dispose of wastewater and wastewater products in a manner that minimises adverse effects on the *environment*\* and safeguards the population from injury and illness caused by infection or contamination resulting from exposure to wastewater.~~

~~To achieve the above objective the following performance criteria shall be considered and addressed.~~

### **Purpose:**

To collect, treat, and dispose of wastewater and wastewater products in a manner that minimises adverse effects on the environment and safeguards the population from injury and illness caused by infection or contamination resulting from exposure to wastewater.

### **Design qualities**

1. The wastewater system shall be designed, constructed and maintained in a manner that:

a. Safeguards public health from potential infection and contamination of natural ground water, water supply, and the soils

b. Safeguards people from loss of amenity due to the presence of unpleasant odours or the accumulation of offensive matter resulting from wastewater and foul water disposal

c. Promotes low impact development

d. Minimises adverse effects on the natural environment.

### **Design Performance**

#### **1. Capacity**

The wastewater system shall be capable of carrying and treating the peak flows anticipated during the economic lifecycle of the system, with due allowance for ground and surface water inflow and infiltration. Population density shall be based on proposed use but in no circumstance provide for less than a minimum of 45 persons per hectare or 3 persons per household for the urban area.

Reticulated design flows shall be not less than the following:

**a. Domestic Flow**

- a. Average dry weather flow (ADWF) - 275 litres/head/day
- b. Wet weather flow (WWF) - 1100 litres/head/day

**b. Commercial and Light Industrial Flow**

- Dry weather flow - 0.22 litres/sec/ha
- Wet weather flow (3 x ADWF) - 0.66 litres/sec/ha

**c. Industrial Areas**

- Specifically determined for the proposed use of the development

**d. Retail and Suburban Commercial Areas**

- vii. ADWF = 0.25 l/sec/ha
- viii. WWF = 0.75 l/sec/ha

~~*Reason*~~

~~*To avoid contamination of the environment and risks to public health associated with overflow of sewage from overfull sewage systems or failure to adequately treat effluent.*~~

**2. Discharge**

Underground piped reticulation shall convey wastewater to an approved discharge point, in a manner that ensures good public health and minimises adverse effects on the *environment*\*.

There is separation of trade wastes from domestic wastewater within the reticulated urban area. In this area separate systems for trade wastes and for domestic wastewater will be required unless trade wastes are treated sufficiently to be accepted for discharge to the domestic wastewater stream.

~~*Reason*~~

~~*To ensure that all wastewater is released to the environment\* only at locations suitable to treat and disperse the discharge so that no adverse effects are caused.*~~

**3. Self cleansing**

All wastewater systems shall be designed so that they are self cleansing with current or expected peak dry weather flows.

*Reason*

~~To avoid blockages and restrictions to the capacity of wastewater systems caused by the accumulation of solids deposited in pipes or other structures.~~

#### 4. Treatment

No wastewater shall be designed in a manner that allows untreated effluent to discharged to the *environment\** unless it has first been treated to avoid the likelihood of contamination of soils, groundwater and waterways except as permitted under the Resource Management Act 1991.

*Reason*

~~To ensure that there is no contamination of the environment\* and risk to public health through the release of contaminants which cannot be assimilated by the environment\*.~~

#### 5. Connection to collection network

Subject to complying with the conditions of *Council's\** trade waste bylaws, wastewater sources may be connected to the public wastewater network.

Private wastewater systems, including septic tanks and privately owned and operated treatment plants, shall be considered on a case by case basis. They shall generally only be permitted where they achieve the least adverse effects on the *environment\** (including consideration of economic life-cycle costs) and it can be demonstrated that sustainable management systems are in place for their long term operation and funding.

*Reason*

~~To minimise the cost and adverse effects of wastewater in the reticulated urban area, ensure a consistent level of service to users and facilitate control over proper treatment and disposal of wastewater.~~

#### 6. Other demand

The wastewater system design shall demonstrate that the design has considered, and will allow for surplus capacity to meet expected future demand.

*Reason*

~~To make the most cost-effective provision of services for long term demand.~~

## **7. Restriction on discharge**

Connection of stormwater drains may not be made to the wastewater system except under extraordinary circumstances. Systems shall be designed to eliminate the risk of inflow and infiltration.

The level of a gully trap for any new connection to the wastewater network shall be:

- at least 50 mm below the finished floor level of adjacent buildings
- at least 150 mm above the nearest opening in the wastewater network
- above the surface level of stormwaters with a 2% or greater probability of recurrence in any year (a 50 year storm)

*Reason*

~~To avoid higher treatment costs and risks of overflow of untreated wastewater as a result of overloading wastewater systems with non-wastewater flows.~~

## **8. Economic life-cycle costs**

Wastewater disposal and treatment systems shall be designed in a way that minimises the overall life-cycle costs inclusive of capital, operating, maintenance and rehabilitation costs. For the purposes of this criterion, the life-cycle shall be taken as no less than.

**a.** Pipe work, appurtenances, all associated concrete work, tankage and detention structures: 80 years

**b.** Mechanical and electrical plant, with provision made for easy maintenance and replacement: 25 years

*Reason*

~~To ensure an appropriate level of economic design, that does not subsequently create an undue burden on ratepayers.~~

## **9. Compatibility and durability**

The wastewater system shall use safe and durable materials which are compatible with their immediate surroundings, be constructed



to eliminate the likelihood of leakage and infiltration and able to withstand anticipated pressures and loads.

Materials used in the wastewater system shall be compatible with Council's\* existing wastewater systems and approved Schedule of Materials.

*Reason*

~~To achieve a system which provides long term performance and minimises the maintenance and replacement component of total lifecycle costs. A consistent form of construction of wastewater systems allows replacement components to be available and ensures that knowledge, expertise and equipment is available to make prompt repairs in the event of failure. This minimises the maintenance component of total lifecycle costs.~~

## **10. Maintainable**

Wastewater systems shall be positioned so as to be easily located, provide reasonable access for maintenance and be constructed in a manner that enables easy isolation and replacement / repair of faults.

*Reason*

~~To ensure access to the system and the system itself is arranged so as to enable preventative and remedial maintenance to be carried out swiftly to ensure continuity of supply without major disruptions to the roadscape.~~

## **11. Security**

The wastewater system shall have adequate alarms, standby pump capacity, access points or other emergency provisions to minimise the risk and extent of loss of service due to failure, or maintenance requirements.

*Reason*

~~To ensure continuity of service which is important to maintain the ongoing safe disposal of wastewater. Components within the system should be provided which allow wastewater discharge to be maintained in the event of failure or maintenance of parts of the system.~~

## **12. On site disposal**

On site disposal systems shall not be used in the Residential Zone in other zones onsite disposal shall have no more than minor environmental effects which can be contained within the lot. They shall be designed to minimise maintenance needs. The design shall be based on field testing and any other site investigations needed to demonstrate that the effects on the environment of the system will be minor.

Independent network disposal (community based) systems shall have environmental effects equivalent or better in all respects with that achieved by public reticulation and treatment, and shall be such that the effects of disposal remain entirely within the lot it is intended to serve or within the specified disposal area. They shall be designed to minimise maintenance needs. The design shall be based on field testing and any other site investigations needed to demonstrate that the effects on the environment of the system will be minor. Where a community system is proposed and, not to be vested in Council, there shall be adequate arrangements for the ongoing maintenance an operation of the system.

*Reason*

~~To ensure that the surface water and groundwater is not detrimentally affected by contaminants from wastewater disposal and to ensure that public health is not put at risk by on-site disposal.~~

## **SPC 4 Stormwater Infrastructure Assessment Criteria**

### **Performance goal**

~~To ensure personal safety, preserve private property and public infrastructure and minimise damage to the *environment*\* from the adverse effects of stormwater runoff.~~

~~To achieve the above objective the following performance criteria shall be considered and addressed.~~

### **Design qualities**

1. The stormwater disposal system shall be designed, constructed and maintained in a manner that:

a. Safeguards people from injury or illness from damage caused by surface water

b. Mitigates adverse effects caused by surface water on other properties

c. Protects the environment from accelerated erosion or sedimentation, and the effects of contaminants in stormwater discharges

d. Avoids excessive modification of natural drainage systems

e. Takes the effects of climate change into account

f. Conveys surface water to an appropriate outfall primarily using gravity

g. Adequately services each allotment, road area or other land area falling to the point of entry into the drainage system

h. The upstream catchment is provided for and the downstream receiving network has the capacity to receive anticipated development

i. Avoids the discharge of stormwater to any wastewater sewer network

j. Integrates other infrastructure and land uses where practical

k. Utilises low impact design principles where necessary or desirable

### **Design Performance**

### 1. Level of protection

The stormwater management system shall:

- Prevent, as far as is practicable, the regular flooding of property and the damage which results from such flooding as required by the following table:

Table 1 Stormwater Design Requirements

<u>Function</u>	<u>Annual Exceedance Probability (AEP %)</u>	<u>Return Period (years)</u>
<u>Primary Systems –</u>		
<u>- Rural</u>	<u>20</u>	<u>5</u>
<u>- Residential and rural residential areas</u>	<u>10</u>	<u>10</u>
<u>- Commercial and industrial areas</u>	<u>1</u>	<u>100</u>
<u>- All areas where no secondary flow paths are available</u>		
<u>Secondary systems</u>	<u>1</u>	<u>100</u>

- Minimise, as far as is practicable, the regular and prolonged flooding of roadways unless they are permitted to be used as a secondary flow path by the infrastructure manager.
- Provide a level of service which in no circumstance is less than that provided to the surrounding environment.
- Provide for potential upstream development of the stormwater catchment.
- Connect to reticulation only where there is downstream capacity to do so.

*Reason*

~~To provide a cost effective system for stormwater management with a level of protection appropriate to the degree of risk, level of potential damage, and maximum acceptable level of inconvenience.~~

### 2. Protection of structures

The stormwater system shall provide a level of protection to *structures\** from inundation based on the use and importance of the structure\*, but in no case less than the requirements of the NZ Building Code.

*Reason*

~~To minimise the risk of damage to property in the event of flooding.~~

### 3. Control of flowpaths

Surface runoff shall be conveyed in suitable pipes, formed channels or defined water courses to approved discharge points.

*Reason*

~~To avoid damage to unprotected ground and to avoid flooding nuisance which may result from uncontrolled surface water flows.~~

#### **4. Overland flow routes**

New development and redevelopment projects shall be planned, designed and constructed so as to maintain or enhance the effectiveness of existing overland flow routes.

New development shall be planned, designed and constructed so that stormwaters cannot exceed a depth of 150 mm above kerb level before they are released overland to approved secondary flowpaths.

*Reason*

~~To protect properties where the capacity of the stormwater system is exceeded, and to avoid deep ponding which may be a hazard or disrupt access.~~

#### **5. Safety**

Stormwater systems shall prevent an undue risk to personal health and safety. Stormwater systems shall incorporate barriers or other measures to prevent people being carried into pipe systems by water flows, and to minimise the risks to individuals caused by excess ponding or water in open channels.

Open channels and surface drains shall be used only where peak flows do not cause an undue hazard or where because of the large quantities of stormwater involved, are needed for effective collection of surface water.

*Reason*

~~To avoid death, injury or significant property damage.~~

#### **6. Development potential**

The design of stormwater systems shall demonstrate that the design has considered and will ensure surface water is controlled without unduly restricting the reasonable development potential of land within the balance of the catchment.

*Reason*

~~To ensure the stormwater system is adequate for and does not inhibit future development.~~

## **7. Other demand**

Stormwater systems shall allow for surplus capacity to meet existing or expected future demand.

*Reason*

~~To make the most cost effective provision of services for long term demand.~~

## **8. Restriction on discharge**

Connection of wastewater drains or other contaminated water may not be made to the stormwater system except under extraordinary circumstances.

*Reason*

~~To avoid discharge of untreated wastewater contaminants.~~

## **9. Economic life-cycle costs**

Stormwater systems shall be designed in a way which, while meeting other criteria, minimise the overall life-cycle costs inclusive of capital, maintenance and rehabilitation costs. For the purposes of this criteria, the life-cycle shall be taken as no less than;

a. Pipe work, appurtenances, all associated concrete work, tankage and detention structures: 80 years

b. Mechanical and electrical plant, with provision made for easy maintenance and replacement: 25 years

*Reason*

~~To ensure an appropriate level of economic design, that does not subsequently create an undue burden on ratepayers.~~

## **10. Compatibility and durability**

Both open and closed stormwater system shall use safe and durable materials and be constructed to minimise the likelihood of leakage and infiltration and to withstand anticipated pressures and loads.

Materials used in the stormwater system shall be compatible with Council's\* existing systems and approved Schedule of Materials.

*Reason*

~~To achieve a system which provides long term performance and~~

~~minimises the maintenance and replacement component of total lifecycle costs. A consistent form of construction of stormwater systems allows replacement components to be available and ensures that knowledge, expertise and equipment is available to make prompt repairs in the event of failure. This minimises the maintenance component of total lifecycle costs.~~

## 11. Maintainable

Stormwater systems shall be positioned so as to be easily located, provide reasonable access for maintenance and be constructed in a manner that enables easy isolation and replacement / repair of faults.

### *Reason*

~~To ensure access to the system and the system itself is arranged so as to enable preventative and remedial maintenance to be carried out swiftly to ensure continuity of supply without major disruptions to the roadscape.~~

## 12. Limitation of peak flows

Stormwater systems shall provide for **source control** systems for stormwater runoff such as on-site soakage and detention or other measures to reduce peak flows as far as is possible.

### *Reason*

~~To minimise increased runoff from new developments requiring upgrading of downstream existing systems at a greater cost to the community.~~

## 13. **No erosion**

Stormwater systems shall ensure that the landform of water courses is stabilised such that the risk of erosion, debris or gravel blockage, inlet and outlet scour and land instability are minimised.

### *Reason*

~~To avoid damage to the environment resulting from the concentration of stormwater flows.~~

## 14. Climate change

The design, construction and operation of stormwater infrastructure shall incorporate design considerations allowing for the effects of climate change, including when assessing down stream capacity and the requirements of potential upstream discharges.

## **SPC 5 Earthworks Assessment Criteria**

### **Performance Goal**

**Note: Where land use consent is required for earthworks in conjunction with subdivision consent, the relevant Assessment Criteria C9 shall also apply.**

### **Design qualities**

Earthworks shall be designed, constructed and maintained in a manner that:

- a. Promotes low impact development
- b. Safeguards health and safety of people and property.
- c. Minimises adverse effects on the natural environment and processes.
- d. Provides for cultural heritage.
- e. Avoids nuisance effects.

### **Performance Criteria**

To improve the potential for development, *earthworks\** proposals shall demonstrate that they ~~have considered and addressed~~ meet the following criteria:

#### **Design Performance:**

##### **1. Utility**

~~To increase the nett yield of useful land on *site\**, without detracting from its long term aesthetic appearance and without limiting or restricting the reasonable development potential of adjacent areas.~~

##### *Reason*

~~To ensure that the *earthworks\** achieve a nett improvement to the developed *site\** but do not harm adjacent sites.~~

##### **1. Low impact development**

Enabling minor works primarily for the installation of infrastructure and the minor leveling of building platforms.

The maintenance of existing landforms, topography, and natural processes such as overland flows while enabling

The retention of topsoil on proposed allotments, including the amount that remains in-situ where practical.

The avoidance of soil runoff as a result of earthworks including there placement of appropriate vegetative ground cover as soon as practical after works on part or the whole site are completed.



The avoidance of discharging sediment from earthworks onto roads or into stormwater or wastewater infrastructure by the development and approval of a Sedimentation Management Plan that sets aside the methods used for managing the off-site disposal of soils prior to works taking place.

## **2. Stability**

To ensure stability of cut batters and fill batters created by *earthworks\**, and of the earthfills and cut platforms themselves under static, live and seismic loading.

The avoidance of creating or exacerbating erosion or slope instability arising from earthworks, including the provision measures or works required for monitoring or securing stability and soils on-site.

*Reason*

~~To allow development of, and investment in, the sites\* to proceed with confidence.~~

## **3. ~~Strength~~ Safety and suitability**

To construct earthfills using a quality of material and standard of compaction which can demonstrably support anticipated building forms, as well as a reasonable assessment of possible future usage.

*Reason*

~~To permit the construction of buildings\* and other structures\* at reasonable cost, which will not suffer from subsequent ground movement.~~

## **4. Aesthetically compatible**

To ensure that the topography altered by *earthworks\** is in keeping with the surrounding *environment\**.

*Reason*

~~To ensure that, after development, earthworked areas merge into the surrounding environment\*.~~

## **5. Serviceability**

To construct *earthworks\** so that modifications to ground levels do not adversely affect the capability of existing utilities to service the modified area, or surrounding ground. To avoid the diversion of stormwater from its natural catchment, the creation of increase flood risk or other hazards in consequence of *earthworks\**.

The avoidance of any actual or potential effect resulting from discharge of soil or other materials arising from earthworks onto any road or reticulated infrastructure.

~~*Reason*~~

~~*To avoid the lowering of the existing standard of service on the site\* and in adjacent areas, as a result of modifying the earthworks\* levels.*~~

## **6. Cultural and heritage items**

1.<sup>170</sup> To ensure that *earthworks\** do not impact on historical and *archaeological sites\** and that areas of significant botanical importance or animal habitat are preserved.

The avoidance or mitigation of cultural effects on Tangata Whenua where necessary, in particular, where there are large areas of excavations proposed, or where there are likely to be cultural values of some significance,<sup>171</sup> including the provision of:

- i. cultural and/or archaeological assessments,
- ii. enabling site access,
- iii. appropriate site work observation and
- iv. any other measures required to avoid effects on cultural heritage<sup>172</sup> and historic heritage by earthworks, where deemed necessary

2 a. The identification of heritage sites and values<sup>173</sup> and the avoidance or<sup>174</sup> mitigation of adverse effects on historic heritage, including natural and built heritage and archaeological sites, including undertaking investigations as relevant and obtaining appropriate authorities under the Historic Places Act 1993 where necessary

b. The need to place an advice note on the decision of consent<sup>175</sup>

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<sup>170</sup> S14 and FS2

<sup>171</sup> S14 Page 8 – Tabled

<sup>172</sup> S14 Page 8 – Tabled

<sup>173</sup> S14 Page 8 Tabled

<sup>174</sup> S14 Page 8 - Tabled

<sup>175</sup> S14 and FS2

*Reason*

~~To ensure the preservation of areas of cultural, historical and environmental importance.~~

**7. Security**

The developer shall provide Council\* with a record of the works carried out by way of a Certification, verifying that the works have been completed to an agreed standard, from an independent qualified and suitably experienced professional engineer.

The ability of any new allotment to be free of instability, erosion, rockfall or any other geotechnical hazards to provide a long term safe and suitable allotment appropriate for the intended future use after earthworks. This may include a requirement for:

- i. A report, a where deemed necessary, in sufficient detail and with appropriate expertise that reflects the complexity of any risk associated with pre and post works

*Reason*

~~To enable future owners to be assured of the extent and quality of the works carried out.~~

**8. Amenity**

The avoidance or mitigation of airborne dust by dust management measures, including specific works to are required to avoid or mitigate dust settling off site.

The mitigation or avoidance of excessive noise and vibration.

## SPC 6 Network Utility Assessment Criteria

### Performance Goal

~~To ensure that allowance is made for electricity supply, telephone and gas connection within the urban boundary.~~

### Design Performance

~~To achieve the above goal, the following performance criteria shall be considered and addressed.~~

### Design qualities

1. The network utilities shall be designed, constructed and maintained in a manner that:

- a. Provides security of supply of basic utility services.
- b. Promotes electronic and digital connectivity.
- d. Is compatible with their adjoining uses.
- e. Minimises adverse effects on the natural environment and people.

### 2. Electricity supply

Electricity supply must be provided to each allotment within the urban area. This should be by means of an underground system for Greenfield subdivision. For other subdivision new bulk supply should be located underground as much as wherever<sup>176</sup> practicable.<sup>177</sup> wherever possible In commercial and industrial areas the supply shall recognise the operational requirements of the probable occupation and use.

#### ~~Reason~~

~~To provide an energy supply for lighting, heating and other uses required by residents and occupants.~~

### 3. Gas and telephone connection

Provision should be made to ensure that gas, where proposed to be installed by the developer, and telephone connections can be provided to each urban allotment and, wherever possible, to each rural allotment. In urban areas this should be by means of an underground system unless served by an existing aboveground structure.

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<sup>176</sup> S13 Page 4 – Tabled

<sup>177</sup> S13

~~Reason~~

~~To provide access to an alternative energy supply and to telecommunications systems for all possible properties. Supply to each allotment is at the discretion of the utility operator.~~

#### **4. Design and construction**

Design and construction of gas, telephone and electricity facilities shall be to the requirements and approval of the respective network utility operators. Design and construction shall recognise the operating access and service requirements of other adjacent utilities.

~~Reason~~

~~To provide facilities compatible with network requirements and to the safety and service standards adopted by the network utility operator without adversely affecting the level of service provided by other network utility operators.~~

#### **5. Compliance certificate**

A compliance certificate shall be provided from the relevant network utility operator, stating that the design and construction of gas, telephone or electricity facilities is satisfactory in standard and level of service and that the network utility operator has undertaken to take over operation and maintenance of the facilities at no cost to Council\*.

~~Reason~~

~~To ensure continuing operation and maintenance of gas, telephone and electricity networks by experienced agencies.~~

## **SPC 7 Streetscape and Landscaping Assessment Criteria**

### **Performance Goal**

~~To impart character and identity to urban areas through appropriate and compatible landscaping.~~

~~To achieve the above objective the following performance criteria shall be considered and addressed.~~

### **Design qualities**

Streetscape and landscaping shall be designed, constructed, planted and maintained in a manner that:

- a. Provides amenity that appropriate for its location.
- b. Provides interest and comfort to public spaces.
- c. Contributes to a sense of community and character
- d. Provides street furniture that is sufficiently durable.
- e. Avoids conflict with network utilities and reticulated infrastructure.

### **Design Performance**

#### **1. Appropriateness**

Planting and other landscaping shall be appropriate to and compatible with the local *environment*\*. Species selection shall be based on consideration of the following:

- ability to survive on the *site*\*
- sympathetic to the scale of the section and berm sizes
- consistent with neighbouring landscape features

#### *Reasons*

~~To integrate the development with its surrounds and any significant natural features and to ensure that planting is suitable for local growing conditions.~~

#### **2. Maintainable and durable**

Planting and other landscaping features shall be easily maintained and minimise overall life cycle costs inclusive of establishment, maintenance and renovation.

In a traffic island, the subgrade shall be removed to the required depth.

*Reason*

~~To ensure an appropriate level of economic design that does not subsequently create an undue burden on ratepayers.~~

### 3. Other services

Landscaping shall not cause, or potentially cause, interference or damage to roadways and utility services, or increase the costs of maintenance of those services. Vegetation proposed to be planted in close proximity to electric lines should be selected and located in a manner that will not result in vegetation breaching the Electricity (Hazards from Trees) Regulations 2003.

*Reason*

~~To ensure infrastructure is unimpeded by landscaping.~~

### 4. Reserve areas

Public land for reserves shall only be created where there is an identified need. Council reserves shall have appropriate legal protection in accordance with the Reserves Act 1977.

*Reason*

~~To avoid undue burden on ratepayers from maintaining land/assets which does not contribute to the amenity needs of the community.  
To ensure an appropriate level of public protection is given to newly created reserves.~~

### 5. Amenity

The type, height and placement of planting in public areas should be such that it minimises opportunity for concealment, vehicle operators' vision, reduced sunlight penetration or other adverse effects on the use of adjacent land.

No planting or landscape feature shall obstruct traffic, pedestrian movement or traffic visibility.

*Reason*

~~To ensure planting promotes public safety and minimises unwanted shading and other adverse effects on adjoining land.~~

### 6. Maintenance of landscaping

Appropriate maintenance of landscaping works shall be completed

sufficiently to ensure planting and other landscaping is established and able to develop without assistance, for a period of 1 year.

*Reason*

~~To ensure the costs of establishment are not a burden on ratepayers.~~

## 7. Lawn areas

Prior to hand over, any lawn areas must be weed free and the surface evenly vegetated and readily mown. Appropriate ornamental species shall be used. (Pasture grass is unacceptable).

*Reason*

~~To ensure that the costs of establishment and maintenance of lawn are not a burden on ratepayers.~~

## 8. Street furniture

Provision of street furniture that:

- i Is durable
- ii Provides comfort
- iii Creates a point of interest in public spaces
- iv Encourages community interaction
- v Is safe for its anticipated use.

## 9. Design features

The development of streetscape and landscaping will avoid creating spaces that contribute to a feeling of a lack of safety. This includes the avoidance of the creation of places of entrapment and providing for passive surveillance of streets and public spaces.

Landscaping shall take into account the provision of natural light to the living and outdoor areas of residential properties in terms of appropriate location and species.

**Note: If provision of fruiting trees is proposed this should be discussed with the Council's Parks and Reserves and Infrastructure Departments as to its appropriateness prior to an application for subdivision being made.**



## **SPC 8 Subdivision Performance Criteria**

### **Subdivision and Infrastructure Assessment Criteria**

Subdivision classified as restricted discretionary, discretionary or Non-Complying Activities will be assessed having regard to the following assessment criteria.

#### 1. General infrastructure development criteria.

All Infrastructure design, construction, operation and maintenance shall be:

- a. Effective and efficient in meeting its functional purpose.
- b. Able to be maintained in an effective, efficient, and cost effective manner.
- c. Affordable to the community over the lifetime of the asset.
- d. Durable over the specified lifespan for infrastructure.
- e. Integrated with other infrastructure and land uses.
- f. Responsive to local conditions including hazards.
- g. Compatible with, and not compromise, the effectiveness of network utilities and other reticulated infrastructure, including parks and reserves.
- h. Generally and substantially consistent with any relevant Servicing and/or Structure Plans.
- i. Compatible with existing networks and infrastructure.
- j. Designed taking into account the effects of climate change.
- k. Is resilient to natural hazards.
- l. Providing for infrastructure connectivity where development adjoins land identified for further development.
- m. Integrated with other infrastructure and land uses<sup>178</sup>

#### **2. General Subdivision criteria.**

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<sup>178</sup> S2

- a. Engineering basis

All subdivision and infrastructure proposals shall be assessed against the ability to achieve compliance with requirements of NZS 4404 2004 as amended by the Wanganui District Council Engineering Document 2012, or alternative as approved by the Alternative Design Procedure.

- b. Easements – Private

All subdivision where infrastructure and network utility connections across private land shall be assessed against the proposals ability to achieve appropriate provision and legal protection of private connections to infrastructure and network utility services over private land.

**3. Site Suitability**

The following assessment criteria shall apply to all subdivision and infrastructure development and shall be assessed against the proposals ability to achieve the following:

- a. The provision of safe allotments free from inundation, slippage, erosion and subsidence suitable for their intended use;
- b. The provision of regular shaped allotments that do not constrain ease of development, with suitably sized building platforms appropriate for the use provided for within the zone.
- c. The requirement for a report from a suitably qualified and experienced person, if required, detailing the suitability of all allotments and any specific works that are required, that reflects the scope, nature, and complexity of the geotechnical issues and constraints facing the development site, and the intended future use;
- d. The requirement for any consent notices where required detailing and securing any specific and/or on-going requirements arising from any report on site suitability;
- e. The avoidance of the requirement for excessive engineering works, excluding specific foundation design and construction, after the issue of a Certificate pursuant to Section 224 of the Resource Management Act
- f. The maintenance of existing topography, significant natural features and existing hydrological flows as far as practicable.

- g. The identification of any part of a proposed allotment that has undergone significant construction or reconstruction including cut, fill, or that is subject to overland flows or natural hazards.
- h. The provision of suitable ground conditions for on-site waste water and stormwater disposal where on-site servicing is required by the District Plan.
- i. The identification of any specific and detailed requirements for low impact stormwater solutions including appropriate soil conditions, maintenance provisions and costs, and life cycle.
- j. Avoidance of potential encroachment into the requirements of the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZCEP: 34 2001) by future building development.

#### **4. Site serviceability**

All subdivision and infrastructure development that requires, and/or, proposes to connect to reticulated water, wastewater and stormwater service shall be assessed against the proposals ability to achieve the following:

- Service connections
  - a. Each allotment is provided with suitable connections to reticulated services that provide appropriate levels of service for water, wastewater, and stormwater.
- Infrastructure capacity
  - b. Subdivisions that are required and proposes to connect to any and all relevant infrastructure catchments or systems proceeds only where:
    - i. there is available servicing capacity or supply for the anticipated total level of development by the proposed and anticipated future development within that catchment as provided for in the relevant zones.
    - ii. Subdivision does not use capacity intended for other areas (including upstream and down stream capacity or supply).
  - c. Where there is not sufficient available servicing capacity or supply for the anticipated total level of development the proposals ability to provide for:
    - a. A suitable alternative method for servicing and associated connections that has been approved by way of the Alternative Design Procedure; AND/OR,

- b. The creation of supply or capacity in accordance with the requirements of this Plan, NZS 4404 2004 and the Wanganui District Council Document 2012 to service the proposal at the subdividers cost; AND/OR,
  - c. On-site attenuation, retention or mitigation of peak and/or total flows to create pre and post development hydrological equilibrium where practicable in the case of stormwater, OR,
  - d. Deferral of the completion of a proposal until such time as Council provides capacity where upgrades to any network is programmed.
- d. Compliance with the New Zealand Fire Service Fire Fighting Supplies Code of Practice 2008 PAS 4509:2008 for allotments with reticulated water, and the ability to comply for sites without reticulated water supply.

### **5. Network utilities**

All subdivision development that is required to, and/or, proposes to connect to network utility services shall be assessed against the proposals ability to achieve the following:

- a. Connections to network utility services are provided to a suitable level of service.
- b. The avoidance of significant costs to connect to network utilities, including any requirement to provide for additional capacity, after the issue of a Certificate pursuant to Section 224 of the Resource Management Act 1991.

### **6. Site Access**

All subdivision development shall be assessed against the proposals ability to achieve the following:

- Crossings and vehicle access
  - a. Safe, practical and durable vehicle accessways/ right of ways and crossings.
- On-site manoeuvring
  - b. The practical provision of forward egress onto Arterial Roads on the Roding Hierarchy.

### **7. Easements and Vesting – Public**

The following assessment criteria shall apply to all subdivision where infrastructure and network utility infrastructure is being

vested in Council and shall be assessed against the proposals ability to achieve the following;

- c. Sufficient land area vested and/or easements to provide efficient access to public infrastructure for operational and maintenance purposes.
- d. The requirement additional for additional vested land area or easement extent to accommodate factors such as topography and the location of other infrastructure to enable reasonable access to infrastructure for maintenance or operational purposes.

### **8. Catchment management**

All subdivision and infrastructure development shall be assessed against its ability to achieve the following;

- a. The design, construction and operation of stormwater, water, and wastewater infrastructure takes in<sup>179</sup> a whole of<sup>180</sup> catchment based approach.
- b. Infrastructure that<sup>181</sup> provides for the maximum potential demand arising from the development the allotments, including future land uses as anticipated by the District Plan, unless that land is constrained by hazards.
- c. Where land is identified for future development higher in the catchment, infrastructure is:
  - i. located in a manner that enables connections or extensions to that infrastructure in the future.
  - ii. provides for the ability to create<sup>182</sup> sufficient capacity for upstream extensions where additional land is zoned for development higher up in the catchment.
- d. New and extended reticulation shall is compatible with upstream and downstream infrastructure.
- e. The identification of any downstream works required to cater for the proposed anticipated use of the allotments.
- f. Where capacity is constrained downstream in the catchment, the proposal shall<sup>183</sup> either:

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<sup>179</sup> S27

<sup>180</sup> S27

<sup>181</sup> S27

<sup>182</sup> S27

<sup>183</sup> S27

- i. Provides capacity for its own servicing needs to the specified level of service<sup>184</sup> by either performing the works required; or,
- ii. Provides a suitable alternative method approved by the Alternative Design Procedure; or,
- iii. Provisions are made for Council to provide that capacity where works are proposed in an existing capital works programme

## **9. Consideration of Alternative Solutions**

All subdivision and infrastructure development that does not use the solutions in NZS: 4404 2004 and the Wanganui District Council Engineering Document 2012, except where the Alternative Design Procedure, is used shall be assessed against the proposals ability to achieve the following:

- a. The design alternative proposed is functional with the subdivision layout proposed;
- b. The alternative does not constrain the ability for connectivity to infrastructure serving other land zoned for development, nor the ability of that land to be developed;
- c. The design alternative meets all the relevant general infrastructure and specific infrastructure requirements and criteria.
- d. Alternative solutions reflect industry best practice.
- e. In the case of design, alternative solutions are approved by the relevant network or infrastructure provider in which it will be.
- f. In the case of construction and materials, alternative solutions shall be approved by the relevant network or infrastructure provider in which it will be vested prior to an application for a certificate pursuant to Section 224 of the Resource Management Act being made.
- g. The required levels of service for infrastructure are maintained.
- h. The ongoing lifecycle needs costs of maintenance are comparable to those in NZS 4404 2004 and the Wanganui District Council Engineering Document 2012.

## **10. Infrastructure deferrals and bonding**

- Crossing deferral

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<sup>184</sup> S27

- a. Applications to defer the construction of vehicle crossings after the issue of a Certificate pursuant to Section 224 shall be approved entirely at Council's discretion. In addition the following shall also apply:
  - i. The applicant shall be required to provide information to establish that either:
    - a. damage to the formation of the crossing will occur prior to the establishment of the land use served by the crossing; OR
    - b. there are multiple locations for a complying vehicle crossing available; AND,
  - ii. A cash bond may be taken in lieu of works of an amount appropriate to the satisfaction of the Development Subdivision Officer.
  - iii. This does not apply to crossings serving multiple lots or where there is only one location for a complying crossing, or for a crossing that has been approved in a specific location but does not comply.
- b. Excluding vehicle crossings, where applications to bond or defer the construction of connections or infrastructure until after the issue of a Certificate pursuant to Section 224 these shall be approved entirely at Council's discretion. In addition the following shall also apply:
  - i. The applicant shall be required to provide information to establish that either:
    - a. That damage to the infrastructure will occur prior to the establishment of the land use served by the crossing; OR
    - b. In the case of vegetation and landscaping, that the subdivision is otherwise finished but is currently outside appropriate planting/growing season , AND;
    - c. Where the infrastructure is to be vested in another party, the approval of that party must be supplied.
    - d. A cash bond may be taken in lieu of works of an amount appropriate to the satisfaction of the Development Engineering Officer.

## **11. Allotment sizes below the minimum**

- 1. Subdivision to create allotments in the Residential Zone under the specified minimum allotment size, including those located within the

Otamatea Development Overlay shall be required to demonstrate the following:

- i. Suitable capacity is available for reticulated servicing for the proposed allotments in the servicing catchment or catchments in which the proposal is located, AND;
- ii. The proposal does not reduce the capacity or level of service available to service the remainder of land within the servicing catchment at a density development intended by this Plan, OR;
- iii. An approved alternative method of servicing that mitigates the effect of additional development density on reticulated infrastructure.

## **12. Subdivision in the Springvale Indicative Future Development Area**

1. All subdivision in the Springvale Indicative Future Development Area shall be required to demonstrate the following:
  - i. Consistency with the indicative roading, stormwater, ponding infrastructure identified on the Springvale Indicative Development Plan.
  - ii. The proposed subdivision directly adjoins, and is a logical extension to, existing development of residential scale and allotment size.
  - iii. Sufficient existing capacity is available in the infrastructure catchment to provide for the scale of development proposed.
  - iv. The proposed allotment sizes are of a residential scale.
  - v. The provision of connectivity and linkages to roads and infrastructure shown in the Springvale Indicative Development Plan.

## **13. Building Platforms and,<sup>185</sup> NZECP:34 2001, and the Electricity Transmission Corridor<sup>186</sup>**

**For subdivision that creates allotments that do not comply with Rule R269 (b) (vi and vii<sup>187</sup>), the following assessment criteria apply**

1. The extent to which the design, construction and layout of the subdivision (including landscaping) allows for activities to be set back from Electricity lines<sup>188</sup> to ensure adverse effects on and from them and on public health and safety are appropriately avoided, remedied or mitigated.

<sup>185</sup> S2 – Appendix E Tabled

<sup>186</sup> S2 – Appendix E Tabled

<sup>187</sup> S2 – Appendix E Tabled

<sup>188</sup> S13 Page 3 – Tabled



2. The provision for the ongoing operation, maintenance and planned upgrade of Electricity lines.<sup>189</sup>

3. The risk to the structural integrity of an<sup>190</sup> the Electricity lines.<sup>191</sup>

4. The extent to which the subdivision design and consequential development will minimise the risk of injury and/or property damage from Electricity lines.<sup>192</sup>

5. The extent to which the subdivision design and consequential development will minimise the potential reverse sensitivity and nuisance effects of Electricity lines.<sup>193</sup>

6. Outcomes of consultation with the affected lines owner.<sup>194</sup>

#### **14. Mechanical Pump Stations**

1. Subdivision proposing or requiring the installation of additional mechanical pump stations shall be assessed on the following:

i. The availability and viability of alternative servicing arrangements for that land;

ii. Whether the land is developable without the use of a pump station;

iii. The costs of operation and maintenance over the lifetime of the station;

iv. Whether or not the land serviced by the pump station is zoned for further intensive development

v. The degree of risk associated with failure of that pump station<sup>195</sup>

#### **15. Historic Heritage**

The following shall be considered for subdivision that locates on land where there are known archaeological sites and/or historic heritage, or where they are likely to occur:

a. The identification, recognition and, as far as practicable, protection of historic heritage, including archaeological sites.<sup>196</sup>

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<sup>189</sup> S13 Page 3 – Tabled

<sup>190</sup> S13 Page 3 – Tabled

<sup>191</sup> S13 Page 3 – Tabled

<sup>192</sup> S13 Page 3 – Tabled

<sup>193</sup> S13 Page 3 – Tabled

<sup>194</sup> S2

<sup>195</sup> S23 and FS1

<sup>196</sup> S14 and FS2

## **SPC 9 General Urban Design Criteria**

**Note: The level of assessment shall take into account scale, scope and complexity of proposal.**

### **Purpose:**

To provide for good quality design in infrastructure and subdivision in order to provide liveable human scale development.

### **1. Low Impact Development**

Subdivision is required to compliment and retain natural features and processes in the first instance. In particular, development shall demonstrate how the application has:

- Retained vegetation which contributes to the overall amenity and character of the site and neighbourhood where possible, or mitigated the loss of pre development vegetation.
- Maintained hydrological balance or has mitigated post development runoff.
- Limited alterations to natural features and landforms to minimal scraping of topsoil to create building platforms and transport infrastructure.
- The extent to which stormwater treatment contributes to an attractive public realm or provides ecological value.

### **2. Context**

Applications for subdivision shall demonstrate an understanding of the setting in which subdivision occurs by promoting:

- The enduring aspects of site and district level focal points, including any significant vegetation, and natural and cultural landmarks and associations.
- The integration of public parks, open space, amenities and community facilities.
- Existing and proposed land uses (living, employment and recreation uses) and required movement networks.
- Natural environmental processes and features such as hydrological flows, solar orientation, climate, topography and ground conditions.
- The mitigation of downstream limitations on servicing infrastructure.
- Subdivision that relates well to its surroundings, cultural features, and makes use of existing features and amenities, such as the retention of trees and water features, view shafts, or good use of the rural interface to enhance the urban area.

- The importance of the importance of<sup>197</sup> archaeological and cultural sites and areas<sup>198</sup>

### **3. Character**

Subdivision design and construction shall demonstrate how character is maintained and enhanced by:

- Retaining and utilising the existing natural and physical environmental features including trees, waterways, built and historic heritage, significant topographical features of the subject site and surrounding areas.
- Protecting and enhancing built, cultural and visual landscape features, landforms and significant view shafts.
- Respecting and integrating features of significance culturally and natural environmental processes.

### **4. Connections**

The connectivity of a subdivision shall be demonstrated by:

- The existence and use of green connections and corridors.
- The degree of permeability of the roading layout.
- The number of connections between the roading network, recreation spaces, other neighbourhoods and natural features.
- The incorporation of multi modal transport options.
- Implementing the Shared Pathways Strategy and Wanganui Urban Transport Strategy.
- The convenience of a development to community infrastructure such as schools, shops, public open space and neighbourhood commercial zones.

### **5. Custodianship**

Applications for subdivision shall identify how the proposal will have achieved custodianship by:

- Demonstrating consultation and communication with the affected community including Iwi and interest groups.
- Providing spaces that are places of community interaction and ownership including streets, recreational areas and focal points.
- Enabling connections with places of value to the community.

### **6. Crime Prevention Through Environmental Design**

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<sup>197</sup> S14 Page 9 – Tabled

<sup>198</sup> S14 and FS2

Subdivision design shall illustrate how CPTED Principles have been implemented by promoting the following:

- Good visibility, sightlines and casual surveillance (overlooking) of public or publicly accessible spaces.
- Safe, direct routes and connections.
- Lighting and illumination that is appropriate to particular spaces and their anticipated uses.
- Avoidance of the creation of places of entrapment.

## **C7 Vehicle Access, Parking and Signage**

In addition to those matters listed in the general assessment criteria section, any non-compliance with the vehicle access and parking and signage provisions shall be assessed according to the following criteria:

- a. The ability to provide for safe and efficient movement of vehicles.
- b. The existing traffic environment and its ability to accommodate new traffic.
- c. The provision for a safe and convenient pedestrian environment if there is likely to be foot traffic associated with, or affected by the activity.
- d. The effect on the amenity of the area and site in terms of the visual appearance and use of the berm.
- e. Whether it is practical to provide alternative parking or access. In respect of national routes and primary arterials, alternative access from other roads is preferable, where this is practicable.
- f. Availability of on-street parking.
- g. The actual and potential effects on the safety and efficiency of the road network.
- ~~h. Where applicable, the degree to which the proposal is consistent with Transit New Zealand's "Planning Policy Manual" or its successors.~~

### **Vehicle crossing separation from level crossings**

**2. For applications that do not comply with Rule R24 - 2.5.1 Vehicle crossing separation from railway level crossings applications will need to demonstrate:**

**a. .The practicality and adequacy of the proposed access on level crossing safety having regard to the location, nature and operation of the proposed activity and/or development; AND**

b. The practicality and adequacy of the proposed access on level crossing safety having regard to the location, nature and operation of the proposed activity and/or development<sup>199</sup>

**Activities located within Level Crossing Triangles**

3. For applications that do not comply with the level crossing triangles in rule R24 2.10, the following criteria apply:

a. Applications for activities within the level crossing triangles in rule R24 2.10 shall demonstrate that buildings and activities within the triangle do not compromise safety within the necessary sight lines for trains and road vehicles at level rail crossings, or of vehicles at road intersections<sup>200</sup>

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<sup>199</sup> S12 and FS3  
<sup>200</sup> S12 and FS3

## **C9 Earthworks**

In relation to assessment of resource land use<sup>201</sup> consent for earthworks or land modification AND subdivision consents, the following matters shall be considered.

- a. The maintenance of existing landforms, topography, and natural processes such as overland flows.

b. The retention of topsoil on proposed allotments, including the amount that remains<sup>202</sup> in-situ where practical.

- c. 1.<sup>203</sup> The avoidance or mitigation of cultural effects on Tangata Whenua where necessary, in particular, where there are<sup>204</sup> large areas of excavations are proposed, or where there are likely to be cultural values of some significance<sup>205</sup> including the provision of<sup>206</sup> any necessity for the following:<sup>207</sup>

- i. cultural and/or archaeological assessments,
- ii. enabling site access,
- iii. appropriate site work observation and
- iv. any other measures required to avoid effects on cultural and historic heritage<sup>208</sup> heritage<sup>209</sup> by earthworks, where deemed necessary

2 a. The identification of heritage sites and values<sup>210</sup> and the avoidance or<sup>211</sup> mitigation of adverse effects on historic heritage, including natural and built heritage and archaeological sites, including undertaking investigations as relevant and obtaining appropriate authorities under the Historic Places Act 1993 where necessary.<sup>212</sup>

b. The need to place an advice note on the decision of consent<sup>213</sup>

d. The avoidance of excessive noise.

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<sup>201</sup> S27

<sup>202</sup> S27

<sup>203</sup> S14 and FS3

<sup>204</sup> S27

<sup>205</sup> S14 Page 8 Tabled

<sup>206</sup> S27

<sup>207</sup> S27

<sup>208</sup> S14 and FS2

<sup>209</sup> S14 Page 8 – Tabled

<sup>210</sup> S14 Page 8 Tabled

<sup>211</sup> S14 Page 8 - Tabled

<sup>212</sup> S14 and FS2

<sup>213</sup> S14 and FS2

- e. The avoidance of soil runoff as a result of earthworks including there placement of appropriate vegetative ground cover as soon as practical after works on part or the whole site are completed.
  
- f. The avoidance of discharging sediment from earthworks onto roads or into stormwater or wastewater infrastructure by the development requirement, where appropriate,<sup>214</sup> and approval of a Sedimentation Management Plan that sets aside the methods used for managing the off-site disposal of soils prior to works taking place.
  
- g. Free The avoidance<sup>215</sup> of instability, erosion, rockfall or any other geotechnical hazards to provide a long term safe and suitable allotment appropriate for the intended future use after earthworks. This may include a requirement for:
  - i. A report, a where deemed necessary, in sufficient detail and with appropriate expertise that reflects the complexity of any risk associated with pre and post works and the suitability of ground conditions.
  
- h. The avoidance or mitigation of airborne dust by dust management measures, including requiring dampening or<sup>216</sup> specific works to are where<sup>217</sup> required to avoid or mitigate dust settling off site.
  - i. The mitigation or avoidance of excessive noise and vibration.
  
  - j. The avoidance of any actual or potential effect resulting from discharge of soil or other materials arising from earthworks onto any road or reticulated infrastructure.
  
  - k. Any effects on the integrity of existing infrastructure.

### **Specific Criteria**

In addition to the matters above, discretion is also restricted over the following matters:

#### - Specific Standards

Where land is being filled a vertical height of more than 0.5 metres and intended for future development, or intended to be used as a future building platform:

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<sup>214</sup> S27

<sup>215</sup> S27

<sup>216</sup> S27

<sup>217</sup> S27



- i. The area/s of cut and fill shall be identified on a Plan and As-Built drawings shall be supplied to Council as soon as practicable after works have been completed in accordance with the technical requirements of NZS 4404 2010 and the Wanganui District Council Document 2012.
- ii. Where intended to be used as a building platform the fill shall be certified by a suitably qualified engineering professional as being suitable to meet the definition of 'good ground' required for timber framed buildings in NZS 3604 2011 as soon as practicable after the completion of the works.

### **C 10 Fences and visual obstruction**

#### Fences adjoining parks and open space and accessways

All subdivision development that adjoins parks and open space and pedestrian and/or cycle accessways shall achieve the provision of passive surveillance opportunities, the avoidance of places of entrapment, and the perception of safety to encourage use of public spaces.<sup>218</sup>

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<sup>218</sup> S27

# **Information Requirements**

## **Subdivision Information requirements**

In addition to any information required by the *Act*\* or any regulations, every application for *subdivision*\* consent shall be accompanied by the following information (as applicable) in such detail as is necessary to determine the actual or potential effects that the *subdivision*\* may have on the *environment*\*:

- a. The address and legal description of the property and a copy of the ~~certificates of title~~ Computer Freehold Register for the land to be *subdivided*\*.
- b. Abutting and underlying title *boundaries*\* and existing *building*\* line restrictions, segregation strips or any other physical restrictions affecting the subject allotment/s.
- c. The balance area of the subdivider's property showing any proposals for future subdivision and *development*\* including connections to infrastructure mains, parks and open spaces and existing and future roads.
- d. The use of colour to highlight lot boundaries and any other distinguishing features.
- e. Contours at an interval sufficient for the design of services.
- f. Topographic and geological details, including areas of loose fill and depth of soil, location and nature of significant site features, and any significant changes or alterations to those features.
- g. Areas of the land that are, or may be, subject to flooding, inundation, landslide liquefaction or subsidence or any other known natural hazard whether identified on the Planning Maps or not, including depth of groundwater where this is closer than 1.5 meters vertically from the surface either permanently or seasonally.
- h. Existing vegetation, including significant areas of bush and individual trees.
- i. Areas of vegetation and/or trees to be retained or protected.
- j. All watercourses, whether permanent or ephemeral, having average normal waterway width greater than 1 metre and any ephemeral water courses including secondary flow paths.
- k. Existing sanitary sewer and stormwater drainage systems with invert

and manhole levels.

**l.** Existing services.

**m.** Existing groundwater bores.

**n.** Existing and proposed septic tanks and irrigation systems.

**o.** Existing roads, carriageways, and pathways to which connection shall be made.

**p.** Existing *buildings*\* and other *structures*\* with description of uses and materials and whether such *buildings*\* or *structures*\* are intended to be retained, relocated, or removed.

**q.** Numbers, areas and dimensions of proposed lots, including net areas.

**r.** Proposed roads, access ways, *service lanes*\*, access lots, and private ways with relevant widths, areas and proposed gradients.

**s.** Proposed local purpose reserves, esplanade reserves, and esplanade strips.

**t.** Proposed easements (drainage, rights of way etc.) with memorandum and/or schedule and existing easements.

**u.** Proposed areas of *excavations*\* and filling, together with proposed finished contours where *earthwork*\* proposals should be accompanied by a report and certificate from a ~~registered~~ chartered engineer or other suitably qualified person with experience in soil mechanics or geotechnical matters as to the *effects*\* of the proposed works and the suitability of the area of finished works for their anticipated uses.

**v.** In the rural areas, information on land use capability as classified in the New Zealand Land Resource Inventory (NZLRI) of the land concerned with particular reference to the identification of areas of elite soils.

**w.** In the Rural, Rural Settlements and ~~Restricted Services Residential~~ Rural B Zones and Coastal Environment Special Management zones, if the proposed lot is 45000m<sup>2</sup> or less, a report from a ~~registered~~ chartered engineer or other suitably qualified person to the effect that each proposed allotment has a sufficient capability to adequately treat and dispose of sewage effluent. This report should address the following:

**(i)** Sufficient area for effluent disposal.

**(ii)** Existing soil types and their properties for effluent disposal (percolation rates).

- (iii) Identification of relevant topographic and drainage features, including water courses and floodplains.
  - (iv) The potential for contamination of water courses and supplies.
  - (v) An assessment of the movement of effluent residuals into ground water, together with any other likely *environmental*\* impact.
  - (vi) An assessment of the likely volumes of waste water to be treated.
- x. An outline plan showing the bulk and location of a potential *building*\* which complies with the relevant rules and standards for the zone concerned may be required where a small allotment size is proposed.
- y. A copy of all consultation and agreements with appropriate *network utility*\* operators.
- z. For all *subdivision*\* within the Coastal Residential Zone, information sufficient to address the matters required for a Comprehensive Structure Plan.
- aa. Identifying all National Policy Statements or National Environmental Standards that apply to the application and an assessment of the applicability and requirements of the any of the above as relevant.
- ab. The location and nature of any known land feature, archaeological site, Waahi Tapu, or heritage feature.
- ac. A record of consultation with and all third parties including Maori and potentially affected persons.
- ad. Identification of the provisions of which an application is made under and how the application does or does not meet the requirements of any relevant provisions.
- ae. Identification of the location and suitability of proposed future building platforms.
- af. Identification of any changes or alternatives to the approved servicing standards proposed to service the proposed subdivision, including, where applicable, documentation from the Alternative Design Procedure.
- ag. Any assessment of the ability of a subdivision and anticipated land use to comply with the New Zealand Electrical Code for Electrical Safe Distances (NZCEP:34 2001).
- ah. Existing electricity transmission lines<sup>219</sup>

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<sup>219</sup> S2

ai. The location of any operational or proposed railway corridor including level and crossings.<sup>220</sup>

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<sup>220</sup> S12 and FS3

## **Definitions**

**Access management** – A CPTED design principle that promotes the use of walkways, fences, lighting, signage and landscape to clearly guide people and vehicles to and from entrances to and between public and private space.

**AEP** – Annual Exceedance Probability – Means the probability of exceedance of a given occurrence, generally a storm, within a period in one year (1% AEP is equivalent to a 1 in 100 years storm event).

**Allotment** – Has the same meaning as in the Resource Management Act 1991.

**Boundary adjustment** – The amendment of the location of contiguous boundaries in accordance with the provisions of this Plan on a Computer Freehold Register without creating additional numbers of allotments.

**Building Platform** – An actual or potential area identified as being suitable for future building activity in accordance with the provisions of this Plan.

**Connectivity** - The state or degree of being connected or interconnected with regard to transport, social, recreation and infrastructure systems.

**CPTED** – Crime Prevention Through Environmental Design - The discouragement of antisocial behaviour through design of the built environment using principles based on access management, defining public and private space, and passive surveillance.

**Cul de sac** – An enclosed local road that connects to another road at only one point, AND includes roads that provide the sole means of gaining access to the roading network for other one connection roads, but have only one connection to a through road.

**Earthworks and/ land modification** - means modification of land surfaces by blading, contouring, ripping, moving, removing, placing or replacing soil or earth, or by excavation, or by cutting or filling operations, including the importation of fill.

~~means any modification to land associated with development, and includes the digging, cutting, trenching, levelling, filling or re-contouring of land and associated vegetation removal, and includes other activities normally associated with excavation, but excludes domestic gardening, farming or forestry activities.~~

**Electricity lines** – All National Grid, sub-transmission and distribution lines that primarily transmit and distribute electricity.<sup>221</sup>

**Entranceway features** – A physical construction designed to advertise or augment the amenity of a road entranceway into a subdivision development.

**Liveable streets** – Roads that are designed around the needs of people as opposed to cars, that promotes a sense of place and community interaction, and is safe for all.

**Liveability** – The quality of life and sense of wellbeing provided by built form, accessibility, positive social interaction, quality public spaces and a clean environment.

**Low impact design/ development** – An engineering approach to land development and stormwater management that recognises and provides for the value of natural systems in order to mitigate environmental impacts and enhance local amenity and ecological values.

**Parks and open spaces** – Formal public areas of either active or passive recreation.

**Passive surveillance** – Design layouts of built forms and other structures and vegetation that enhances visibility of activities occurring in public spaces.

**Permeability** – A. With regard to Roads: The extent to which connections are provided between roads within the roading network.  
B. With regard to fences or boundary structures: The degree to which space is provided that is visually unobstructed from one side to the other.  
C. With regard to ground surfaces, the degree to which water is able to infiltrate through it to ground.

**Place making** – The process and act of giving a positive purpose and meaning to public spaces.

**Places of entrapment** – Designs where built form creates spaces that prevents safe egress or access which encourages antisocial interaction. accessible for the enjoyment of everyone.

**Potable water** – The same meaning as defined in the Health (Drinking Water) Amendment Act.

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<sup>221</sup> S13 Page 3 – Tabled

**Potential household units** – The number of actual or theoretical household units that could reasonably be placed on a given allotment calculated by the following:

Potential household units =

Total allotment area – Physical and legal constraints (Easements, ROW's, hazards)

Minimum lot size

Where the number of potential dwellings exceeds a whole number, this shall be rounded to the lowest whole number.

**Private space** – Places that are not intended to be accessible to the general public without explicit invitation.

**Public space** – Places that are open and accessible to all people.

**Reticulated infrastructure** – Council owned networks of infrastructure services including for the provision of water, wastewater, and stormwater services including pipes, associated pumping stations, treatment works, swales, detention areas, and other ancillary equipment, structure or facilities

**Reticulated water services** – Water, wastewater and stormwater reticulated infrastructure.

**Reverse sensitivity** - The conflict between incompatible land uses where a newly established activity complains about the effects on amenity (environmental qualities i.e. levels of noise) from a legally established pre-existing activity.<sup>222</sup>

## **Def126 Road**

For For the purpose of this Plan “road” includes:

- (i) road as defined in the Local Government Act 1974 and the Transit New Zealand Act 1981; and
- (ii) all land within the legal road reserve; and
- (iii) all land comprising formed and existing roads under the control of the road controlling authority

### **The Status of Formed and Unformed Roads**

~~On the District Plan Maps, all formed legal roads, and some unformed legal roads are coloured white. With regard to the~~

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<sup>222</sup> S2



~~application of District Plan objectives, policies and rules, the Plan provisions of the zone in which any formed or unformed legal road is located shall apply. Where a road is stopped, the Plan provisions for the zone on which the stopped road is located shall apply. Where a formed, unformed or stopped road is bounded by different zones, the demarcation between zones is the former centre of the road.~~

~~*Note: Any activities that occur within road corridors must be authorised by the owner of the road. This provides a process for the owner (in most cases Transit New Zealand or Wanganui District Council) to issue what is in effect a 'licence to occupy' prior to any activity establishing. Network utility operators will not be required to obtain such authorisations where they comply with the enabling legislation that provides for network utility activities within road corridors.*~~

**Road controlling authority** - The authority, body, or person having control of the road, and includes a person acting under and within the terms of a delegation or authorisation given by the controlling authority.

**Secondary Flow** – The estimated surface water runoff in excess of the primary design flow of the stormwater network.

**Secondary flow path** – The path taken by stormwater runoff in excess of the primary design flow of the stormwater network.

**Segregation strips** – A piece of land, or restrictive covenant, or easement, other means by which prevent land being accessing legal road.

**Servicing capacity** – The level of service that infrastructure is designed and constructed to provide for all intended users throughout its entire catchment.

**Stormwater** – Rainwater that does not naturally percolate into the ground or evaporate.

**Swale/s** – A constructed watercourse shaped or graded in earth materials and stabilised with suitable vegetation or rocks for the conveyance, attenuation, and the treatment of storm water runoff.

**Urban Design** - The design of the buildings, places, spaces and networks that make up our towns and cities, and the ways people use them.

**Wastewater** – Water that has been used and contains unwanted dissolved or suspended substances from communities.



## PART 1: GENERAL REQUIREMENTS AND PROCEDURES

### 1.1 Scope 1.2 Interpretation 1.2.1 General

### 1.2.2 Statutory requirements Note

This Document shall be read in conjunction with NZS 4404 : 2004.

### 1.2.3 Definitions

#### Add the following new definitions:

- DEVELOPERS SITE REPRESENTATIVE – means a professional engineer or engineering technician appointed by the Developer, and accepted by the WDC, to supervise the development works on his behalf.
- AUTHORISED OFFICER – the Authorised Officer for Wanganui District Council for approving engineering plans is the Council's Subdivision Engineer or as delegated by WDC.
- AUTHORISED REPRESENTATIVE – A person appointed by the Authorised Officer to oversee the Development works on his behalf.
- DESIGNER/DESIGN ENGINEER - the Designer/Design Engineer shall be a person with experience and qualified to sign off producer statements.
- SUITABLY QUALIFIED DESIGN PROFESSIONAL – As defined in the "Guidance on Use of Producer Statements" document – See Appendix K.
- SUITABLY QUALIFIED PROFESSIONAL – See above.
- THE WDC will approve suitably qualified persons.
- EARTHWORKS: area greater than 100m<sup>2</sup> and 500mm deep.
- GEOTECHNICAL ENGINEER means a Chartered Professional Engineer (CPEng), or an engineering geologist, with recognised qualifications and experience in geotechnical engineering, and experience related to the development.
- CARRIAGEWAY – that part of a road consisting of the movement lane, sealed shoulder, and parking and loading areas when provided within the road.
- CORRIDOR MANAGER – has the same meaning given to it by the proposed utilities access legislation.
- CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN – has a set of four principles: surveillance, access management, territorial reinforcement, and quality environments of the built environment. These CPTED principles lead to

a reduction in the incidence and fear of crime as well as an improvement in the quality of life.

- DRINKING WATER – As defined in the Health (Drinking Water) Amendment Act.
- FREEBOARD – A provision for flood level design estimate imprecision, construction tolerances, and natural phenomena (such as waves, debris, aggradations, channel transition, and bend effects) not explicitly included in the calculations.
- LOCAL AUTHORITY – As defined in the Local Government Act 2002, and includes territorial authorities and regional councils.
- LOW IMPACT DESIGN – An approach to land development and stormwater management that recognises the value of natural systems in order to mitigate environmental impacts and enhance local amenity and ecological values.
- MOVEMENT LANE – That part of the formed and sealed road that serves the link function in a road. It may have a shared use for other activities such as walking, cycling, parking, and play.
- POTABLE WATER – As defined in the Health (Drinking Water) Amendment Act.
- RECEIVING WATER – The water body that receives the discharge from the stormwater conveyance system and is usually a watercourse, stream, river, pond, lake, or the sea.

#### 1.2.4 Abbreviations

##### Add the following new abbreviations:

- TARGET OPERATING SPEED – The desired maximum speed for motor vehicles identified by the designer to suit the land use context and road classification. This speed can be managed by physical and psychological devices such as narrowed movement lanes, reduced forward visibility, parking, slow points, build outs, leg lengths, chicanes, planting, landscaping, street furniture, and art works.
- WAHI TAPU – Means a place sacred to Maori in the traditional, spiritual, religious, ritual, or mythological sense.
- CBD – central business district
- CBR – California bearing ratio
- CPTED – Crime prevention through environmental design
- du – dwelling unit
- ESA – equivalent standard axle
- FAC – free available chlorine
- FAR – floor-to-area ratio
- FL – flange
- g/m<sup>3</sup> – grams per cubic metre

- HDD - horizontal directional drilling
- IQP – independent qualified person
- Km – kilometre
- Km/h – kilometres per hour
- LA – local authority
- LID – low impact design
- MDD – maximum dry density
- NES – National Environmental Standard
- NIWA – National Institute of Water and Atmospheric Research
- NPS – National Policy Statement
- NZBC – New Zealand Building Code
- NZHPT – New Zealand Historic Places Trust
- NZTA – New Zealand Transport Agency
- PE 80B – polyethylene with minimum required strength (MRS) of 8 MPa as defined in AS/NZS 4130 and AS/NZS 4131.
- Polyethylene with MRS of 10 MPa as defined in AS/NZS 4130 and AS/NZS 4131
- PIPA – Plastics Industry Pipe Association of Australia Ltd
- PN – nominal pressure class (maximum rated operating pressure)
- PP – polypropylene
- PVC-O – orientated polyvinyl chloride
- RMA – Resource Management Act
- Soc – socket
- STP – specified test pressure
- vpd – vehicles per day

### **1.3 Relationship with Resource Management Act 1991 and Building Act 2004**

#### **1.3.1 Resource Management Act**

**Add the following new clause:**

In addition to the RMA, the Historic Places Act regulates the modification of archaeological sites on all land and provides for substantial penalties for unauthorised destruction, damage or modification of these sites.

Archaeological sites encompass and place associated with human activity that occurred before 1900 which may provide evidence, through archaeological investigation methods, about the history of New Zealand.<sup>223</sup>

The Act makes it unlawful for any person to destroy, damage, or modify the whole or any part of an archaeological site registered with the New Zealand Historic Places Trust (NZHPT),<sup>224</sup> without the prior authority of the NZHPT. This is the case regardless of whether:

- (a) The site is registered or recorded by the council in planning documents;
- (b) The land on which the site is located is designated;
- (c) The activity is permitted under the district or regional plan; or
- (d) A resource or building consent has been granted.

Therefore approval from the NZHPT is required if a site registered with the NZHPT is affected, in addition to any council approval that may be required.

Furthermore if the site is known to be associated with pre-1900 human activity, or there is reasonable cause to suspect such an association, the developer should consult with the NZHPT prior to undertaking any earthworks or ground disturbance.<sup>225</sup>

The following advice note may be placed on land use and subdivision consent decisions where there archaeological sites are present or likely to be present:

**“Advice note: It is possible that archaeological sites may be affected by work authorised under this District Plan. Evidence of archaeological sites may include burnt and fire cracked stone, charcoal, rubbish heaps including shell, bone and/or glass and crockery, ditches, banks, pits, old building foundations, artefacts of Maori and Europeans origin or human burials. The applicant is advised that to contact the New Zealand Historic Places Trust if the presence of an archaeological site is suspected. Work affecting by archaeological sites is subject to a consenting process under the Historic Places Act 1993. If an activity such as earthworks, fencing, or landscaping may modify, damage or destroy any archaeological site(s) an authority (consent) from New Zealand Historic Places Trust must be obtained for work to proceed lawfully. The Historic Places Act 1993 contains penalties for unauthorised site damage.”**<sup>226</sup>

### 1.3.2 Building Act

Any reference to Act covers latest legal legislation.

### 1.3.3 Historic Places Act

**Add the following new clause:**

In addition to the RMA, the Historic Places Act regulates the modification of archaeological sites on all land and provides for substantial penalties for unauthorised destruction, damage or modification of these sites. What constitutes an archaeological site and the requirements of the Historic Places Act are discussed above in 1.3.1<sup>227</sup>

~~The Act makes it unlawful for any person to destroy, damage, or modify the whole or any part of an archaeological site registered with the New Zealand Historic~~

<sup>223</sup> S14

<sup>224</sup> S14

<sup>225</sup> S14 Page 9 – Tabled

<sup>226</sup> S14

<sup>227</sup> S14 Page 9 – Tabled

~~Places Trust (NZHPT), without the prior authority of the NZHPT. This is the case regardless of whether:~~

~~(a) The site is registered or recorded by the council in planning documents;~~

~~(b) The land on which the site is located is designated;~~

~~(c) The activity is permitted under the district or regional plan; or~~

~~(d) A resource or building consent has been granted.~~

~~Therefore approval from the NZHPT is required if a site registered with the NZHPT is affected, in addition to any council approval that may be required.~~

~~Furthermore if the site is known to be associated with pre-1900 human activity, or there is reasonable cause to suspect such an association, the developer should consult with the NZHPT prior to undertaking any earthworks or ground disturbance.<sup>228</sup>~~

#### **1.3.4 Other legislation**

**Add the following new clause:**

The Reserves Act, Conservation Act, and other Acts may also require consideration when undertaking land development and subdivision infrastructure. Covenants (a legal restriction or agreement recorded on the title of a property that is a matter of private contract) may also require consideration. For example, a Queen Elizabeth II Act Open Space Covenant is a legally binding protection document agreed between a landowner and the QEII National Trust.

### **1.4 Requirements for design and construction**

### **1.5 Approval of design and construction**

#### **1.5.1 Documents to be submitted for design approval**

##### **1.5.1.1 Add the following paragraph:**

At concept stage sufficient detail needs to be submitted so that WDC can be assured that the subdivision is functional and meets the required standards.

#### **1.5.2 Drawings**

##### **1.5.2.1 General**

**Add the following:**

See legend of line type and symbols in Appendix A.

##### **1.5.2.1 General**

**Add the following sentence:**

As Built drawings shall be submitted in accordance with Appendix J of this document.

##### **1.5.2.2 Composition of drawings**

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<sup>228</sup> S14 Page 9 – Tabled

**Add the following sentences:**

(e) All levels to be shown on a plan shall be in terms of a recognised datum. The following hierarchical precedence is currently in effect for datums.

1. City datum
2. New Zealand Vertical Datum 2009 (NZVD 2009)  
**Note:** NZVD 2009 = Moturiki 1953 + 0.24m; or  
NZVD 2009 = City Datum + 0.30m
3. The recognised LINZ mean sea level datum i.e. Moturiki Datum 1953 or Wellington Level Datum 1953 or New Zealand Geodetic Datum 2000 (NZGD2000)
4. Assumed datum with easily recognised origin (i.e. Manhole lid and invert level)
5. A local peg is only acceptable in rural areas.

Note:

**Moturiki 00 = City Datum 100.06 so  
Moturiki level = City level – 100.06**

**Level Control**

On each development in excess of 7 lots, and, where a road is required to service the lots, and there is an existing Wanganui City or Land Information New Zealand level Bench Mark within 500m of the intersection of the new road with the existing road, the developer shall arrange with the surveyor to install within the new road reserve, (in a position that will remain free from disturbance and as part of the survey traverse network), a permanent Reference Mark set in a concrete block of 300mm square and 450mm deep.

The mark is to be either a Land Information New Zealand bronze plaque or a stainless steel pin complying with the Land Information New Zealand Geodetic standards.

The mark so placed is to be levelled in terms of the adjacent Bench Mark to Land Information New Zealand 2<sup>nd</sup> Order Standards. The level is to be shown in Wanganui City Datum on the as built plans supplied to the WDC at the completion of the development.

Where there is no existing Bench Mark within 500m of the development, a mark as described above is to be placed for future expansion to the level network.

**1.5.2.2(b) Composition of Drawings**

Add the following clause:

Detailed plans are required for each service on a separate sheet. A general arrangement plan to show all services without detailed information should also be provided.

The drawings shall be submitted in PDF and DXF format. The format of the DXF file must be identified when submitting.

**1.5.2.3 Scale**

**Add the following sentence:**

WDC requires plans to be in 1:500 scale.

**1.5.2.4 Content of drawings**

**1.5.2.5 Recording of work – as-built information**



**1.5.3 Design basis for documents submitted for approval**

**1.5.3.1 Standard design basis**

**1.5.3.2 Alternative design basis**

**1.5.3.3 Cost benefit of life cycle costing**

**Add the following clauses:**

WDC require that the designer ensure that their design promotes minimum maintenance costs. This applies to all references relating to lifecycle cost throughout NZS 4404.

Life cycle costing may be used to consider options within a proposal or a proposal as a whole. In undertaking a life-cycle costing, consideration shall be given to the initial costs borne by the developer and the maintenance and replacement costs borne by the future owners or the LA. A reasonable balance shall be maintained between these short-term and long-term costs.

**1.5.4 Approval of design**

**1.5.4.1 Add comment**

The WDC require 3 sets of drawings for approval. One signed approved set will be returned to the developer. This matches the Building Consent approval process.

**1.5.4.2 Approval before commencing work**

**1.5.5 Notification of contracts and phases of work**

**1.5.6 Supervision of work**

**Replace the second paragraph**

WDC will require completion certification. The certificates shall be in the form given in Schedules 1B and 1C.

**1.5.7 Connecting to existing services**

**1.5.8 Testing**

**1.5.9 Maintenance**

**1.5.10 Completion documentation**

**1.5.11 Approval of uncompleted work**

**1.6 Bonds and charges**

**1.7 Add the following new clause:**

**1.7 Performance Bond**

The WDC will, at S224 approval stage, require a two year performance bond from the Developer, effective from the time of issue of the Section 224 Certificate. WDC may call upon the applicant to meet the costs of any failure of the road or public services, which can be attributed to faults in the design, or construction of the development.

**1.8 Add the following new clause:**

**1.8 Levels of Service**

For Levels of Service refer to the WDC Ten Year Plan, Volume 2, Annual Plan, Policies.

**1.9 Add the following new clause:**

**1.9 Other Services**

- 1.9.1 Rail  
Subdivisions adjoining or crossing a rail line will require the necessary approval from ~~Ontrack~~ KiwiRail<sup>229</sup> (Zealand Railways Corporation).
- 1.9.2 Airports  
Subdivisions adjoining or crossing an airport will require the necessary approval from the Airport Authority.
- 1.9.3 State Highway  
Subdivisions adjoining or crossing a state highway will require the necessary approval from the State Highway Authority.

**1.10 Add the following new clause:**

**1.10 Health & Safety**

No development works are to commence until the developer has identified all potential hazards, and formulated a Health and Safety Plan to address these hazards and all other requirements of the Health and Safety in Employment Act.

**Schedule 1D Schedule 1D As-Built Plans**

See Appendix J for the new Schedule 1D.

**1.11 Add the following new clause:**

**1.11 Low impact design**

Low impact design (LID) is both a design approach and a range of structural techniques that can be applied to urban development and stormwater management. As a design approach, LID provides an opportunity to identify and recognise natural features and integrate these into the design of development layouts in order to minimise environmental impacts or enhance natural features. The integration of natural processes in the design stage of a development can result in more attractive, multifunctional landscapes with greater social, environmental, cultural, and transport outcomes.

Low impact design solutions that use natural processes and add value to urban environments are the preferred approach.

**1.12 Add the following new clause:**

**1.12 Climate change**

Climate change is likely to increase the magnitude of some hazards, therefore it is important to incorporate risk management in the design of infrastructure supporting new developments to maintain the same level of service throughout the design lifetime. The design of infrastructure for land development and subdivision needs to provide for the impact of sea level rise and the increased frequency of extreme weather events.

<sup>229</sup> S12 and FS3

### C1.5

*Amendments to the Resource Management act, the Local Government Act 2002, and the Building Act require LAs to have particular regard to the effects of climate change when making decisions under these Acts.*

*In coastal areas, the proposed 'New Zealand coastal policy statement' (policy 52) requires LAs to consider the location of any new subdivisions in the context of avoiding or reducing potential coastal hazards.*

*The government is considering the development of a number of other national policy instruments which may affect decision-making by local authorities, including a 'National environmental standard on seal level rise' and a 'National policy statement on flood risk'. These would not take effect until they are gazetted.*

## 1.13 Add the following new clause:

### 1.13 Urban design protocol

The *New Zealand urban design protocol* seeks to ensure that the design of buildings, places, spaces, and networks that make up our towns and cities, work for all of us, both now and in the future. NZS 4404 includes recommended best practices that support urban design protocol initiatives. The *New Zealand urban design protocol* identifies seven essential design qualities for good urban design:

- (a) Context: seeing that buildings, places, and spaces are part of the whole town or city;
- (b) Character: reflecting and enhancing the distinctive character, heritage, and identity of our urban environment;
- (c) Choice: ensuring diversity and choice for people;
- (d) Connections: enhancing how different networks link together for people;
- (e) Creativity: encouraging innovative and imaginative solutions;
- (f) Custodianship: ensuring design is environmentally sustainable, safe and healthy;
- (g) Collaboration: communicating and sharing knowledge across sectors, professionals and with communities.

The *New Zealand urban design protocol* has been the primary influence on the layouts that are encouraged in this Standard.

## **PART 3: ROADS**

### **3.1 Scope**

### **3.2 General**

#### **3.2.1 Objective**

#### **3.2.2 Relevant standards and guideline documents**

**Add the following new paragraph:**

The developer shall comply with the WDC policy and procedures for the excavation and reinstatement of works within road reserve, this was historically referred to as the Street Opening Policy, which has been replaced with:

Best Practice for Utility Services Access and Reinstatement in Public Utility Corridors:

- *NZS HB 2002:2003 Code of Practice for Working in the Road*

Temporary Traffic Management:

- *Transit New Zealand Code of Practice for Temporary Traffic Management (CoPTTM)*, and

Road Controlling Authorities draft *Local Roads Supplement to TNZ CoPTTM*

#### **3.2.3 Roading hierarchy and design**

**Add the following new paragraph:**

Subdividers/developers should obtain a specific determination from the WDC, on a proposed/current road's status, before proceeding with detailed designs for roads.

Where local roads are cul de sac's, they shall not exceed 300 metres in length in urban areas without specific approval from WDC. Cul de sac's of this length shall be designed in terms of "Residential" roads in Table 3.1. This approval will only be given where the proposal has been subject to specific design attention, including an analysis of alternative layouts.

Where urban roads run generally parallel at a separation of 200 metres or less, and where the topography permits, they shall be connected by lateral roads at a spacing of no less than 600 metres.

The completed roading design may be required to be subject to an independent safety audit by a qualified and approved traffic safety professional, at the developers expense, with the audit report made available to WDC at the time that the design plans are submitted to WDC for approval.

WDC's approved Long Term Road Hierarchy Network Plan is covered in the District Plan.

#### **3.2.4 Traffic management plan**

**Add the following new sentence:**

The Traffic Effect Assessment documentation is shown in Appendix F.

- 3.2.5 Public transport
- 3.2.6 Classification of urban roads
- 3.2.7 Classification of rural roads

**3.2.8 Public or Private Road**

**Add the following new clause:**

WDC reserves the right to determine whether a road is deemed to be public or private. In most cases a road will be deemed public if it serves 7 or more dwelling units.

**3.3 Design**

- 3.3.1 Minimum requirements
- 3.3.2 Road geometric design
  - 3.3.2.1 Design parameters
    - 3.3.3.2 Sight distance

**Table 3.1 Road design standards – Urban (speed limit  $\leq$  70 km/h)**  
**Note: Table 3.1 has been amended and moved to Appendix L.**

- Table 3.2 Road design standards – Rural (speed limit up to 100 km/h)**
- Table 3.3 Safe speeds on horizontal curves**
- Table 3.4 Superelevation run-off**
- Table 3.5 Widening of curves for urban kerbed streets**
- Table 3.6 Vertical curve lengths**

**Table 3.7 Road and Street Name Signs**

- 3.3.3 Pavement structural design
  - 3.3.3.1 CBR design method for rigid and flexible pavements
  - 3.3.3.2 CBR tests
- 3.3.4 Safety provision on hills

**Figure 3.1 Parameter relationship**

- 3.3.5 Traffic calming in residential streets
- 3.3.6 Parking
- 3.3.7 Intersection design
- 3.3.8 Roundabouts

**Figure 3.2 Car park dimensions**

**Figure 3.3 Minimum traffic sight lines at non-signalized intersections**

- 3.3.9 Cul-de-sac heads
- 3.3.10 Bus bays
- 3.3.11 Special road and footpath provisions near places of assembly
- 3.3.12 Footpaths, pedestrian accessways, cycleways, berms
  - 3.3.12.1 Urban

**Figure 3.4 Dimensions of cul-de-sac turning areas**

**Figure 3.5 Turning areas for cul-de-sacs**

**Figure 3.6 Bus bays: 3.0 m and 3.5 m**

**Figure 3.7 Pedestrian accessway cycle barriers**

**Figure 3.8 Footpath construction – typical sections**

**Replace this Drawing**

See updated drawing at the back of this document RD-WDC-016.

**3.3.12.2 Rural**

**3.3.12.3 Cycleways**

**Add the following new paragraph:**

Cycleways to conform to WDC's cycle strategy.

**3.3.12.4 Footpath and cycleway surfacing**

**Add the following new sentence:**

In residential areas the acceptable surfacing for footpaths shall be concrete.

Coloured concrete and stamped concrete shall not be used.

**3.3.13 Traffic services, signage and road furniture**

**Add the following new clause:**

**Road and Street Name Signs**

Road and street name blades shall comply with Table 3.7.

Posts shall be either:

100mm by 100mm rough-sawn H4 treated timber posts painted white or,  
60mm diameter round fluted aluminium posts powder-coated white.

**Table 3.7: Road and Street Name Signs**

RTL Street Name Blade Specifications Manual PART 2 WELLINGTON

**WANGANUI DISTRICT COUNCIL  
 STREET NAME BLADE - NO ARROW**

<b>WANGANUI RD</b>	
<b>EXTRUSION</b>	
BLADE DEPTH: 200mm	TYPE: Signfix - Powder Coated
BLADE LENGTHS: 1200mm max for double sided (2 x Single sided for lengths over 1200mm)	
ENDS: Square	COLOUR: White
<b>LEGEND</b>	
LETTER STYLE: Highway Series D	SPACINGS: End of Blade to Street Name = 70mm Street Name to Rd St etc = 70mm (min) Rd St etc to end of blade = 70mm
LETTER HEIGHT: 120mm	
ARROW: Nil	LOGO: Nil
COLOUR: White	CONDENSING*: 80%
REFLECTIVITY: HI	SPACING*: -55%
<b>BACKGROUND</b>	
REFLECTIVITY: HI	HEIGHT: 200mm
COLOUR: Blue EC Film	BORDER: Nil
<b>RTL CODES</b>	
CS33 305-316 Single Sided	CS33 405-416 Double Sided
<b>NOTES</b>	
Spacing and condensing modified 20 <sup>th</sup> July to match the Wellington made blades	

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### 3.3.14 Trees and landscaping

Add the following new sentence:

No building, fence or vegetation on any property shall be erected or permitted to grow in a manner which adversely affects visibility at any road intersection, including access to lots.

### 3.3.15 Road lighting

Add the following new clauses:

#### 3.3.15.1 General

Developers shall be responsible for design and installation of street lighting and all associated cabling for all new development areas.

All new lighting should be agreed to by Council with regards to the appropriate lighting category as per AS/NZS 1158.3.1:2005 – Part 3.1.

~~In addition to specific areas noted below, lighting shall be adequate to ensure safety, security and visibility for the convenience of residents and road users. It shall not be excessive in design such that it creates a nuisance, a hazard, or excessive operating cost. To ensure these criteria are met, street lighting shall be the subject of specific design for each development proposal.~~

~~To minimise the cost of maintaining replacement stock and ensure consistency of appearance and amenity, lighting columns and lanterns shall be consistent with adjacent existing lighting systems where these comply with WDC's current lighting practice. Where~~

~~developers wish to use an alternative form of lighting, WDC's may, subject to approval of the developer's proposal, require that the developer contribute spare components into the maintenance stock, or contribute to a maintenance fund.<sup>230</sup>~~

Poles shall be galvanised steel, and of one of the following types:

a) A 7.3m CSP Octolight suburban type with 1m curved outreach or equivalent alternative and ground planted.

b) A 10.0m CSP Octolight pole with 3.0m curved outreach or equivalent alternative and ground planted

c) A 10.0m CSP pole with 3.0m curved outreach or equivalent alternative with a shear base.<sup>231</sup>

### **3.3.15.2 Urban Street Lighting**

In addition to recognising the relative requirements of the roading hierarchy, the lighting design shall focus on potential hazard areas, such as intersections, pedestrian crossings, public transport waiting areas and other points of community gathering. Street lighting shall be provided on all public roads as well as pedestrian and cycle accessways. If developers wish to light private rights of way, then the costs of installing, operating and maintaining such lights shall be at the expense of the developer and/or the subsequent owners.

### **3.3.15.3 Rural Street Lighting**

Developers in rural areas, where new development creates a hazard, shall provide street lighting. Such areas may include (but are not necessarily limited to) new road junctions, additional loading on existing junctions, or areas of substandard geometry or width.

Each case is to be judged on its merits, but it is important that the lighting system provides an unambiguous message to rural drivers. To this end, single lanterns are not considered adequate warning of a rural intersection.

### **3.3.15.4 Other Utilities**

For urban and peri urban areas, underground cabling is the preferred method of installation. Refer also to the WDC's District Plan requirements.

- 3.3.16 Bridges and culverts**
- 3.3.17 Non public accesses (urban and rural)**
- 3.3.18 Multi-unit non public accesses (urban and rural)**

**Add the following clause to (n)**

All weather non-permeable surface is acceptable for rural accesses.

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<sup>230</sup> S27

<sup>231</sup> S27



### 3.3.19 Crossings

**Add the following new clause:**

#### 3.3.19.1 Urban

The width of the vehicle crossing shall be defined as the width at the property boundary.

**Replace the 2<sup>nd</sup> to last sentence of the 3<sup>rd</sup> paragraph with:**

All crossings shall be surfaced with concrete.

**Replace last sentence, 3<sup>rd</sup> paragraph with:**

Drawings RD-WDC-001, RD-WDC-003, RD-WDC-0005 and RD-WDC-007 show acceptable details of vehicle crossing.

#### 3.3.19.2 Rural

The width of the vehicle crossing shall be defined as the width at the property boundary.

**Figure 3.9 Maximum breakover angles for vehicular access to property**

**Figure 3.10 Standard light duty vehicle crossing detail**

**Replace this Drawing**

See updated drawing at the back of this document in Appendix A.

- 3.3.20 Fencing
- 3.3.21 Road drainage
  - 3.3.21.1 Calculations and design
  - 3.3.21.2 Subsurface drains
  - 3.3.21.3 Side drains/water tables

**Figure 3.11 Under kerb drainage and rural subsoil drainage**

#### 3.3.21.4 Kerbs and channels

**Replace the first paragraph with the following:**

Where kerbs and channels are to be provided on carriageways they should comply with figure 3.12. Mountable kerb will not be allowed where it will impinge on pedestrians, utility services or safety. Footpaths may need strengthening if mountable kerb is used. See Drawing RD-WDC-020.

- 3.3.21.5 Sumps
  - 3.3.21.5.1 Sump location

**Figure 3.12 Kerbs and dished channels**  
See supporting Drawing in Appendix A.

See updated drawing at the back of this document for standard and mountable kerb and channel RD-WDC-020.

- Figure 3.13 Typical sump to driveway or right of way**
- Figure 3.14 Flat channel or yard sump**

**Figure 3.15 Hillside sump**

**Replace this Drawing**

See updated drawing CM-WDC-006 in Appendix A.

**Figure 3.16 Add-on back-entry sump for hillside situations**

**Figure 3.17 An alternative sump for hillside situations**

**Figure 3.18 Special entry to double sump in hillside channel**

**Figure 3.19 Double back-entry sump for road low points**

**3.3.21.5.2 Side-entry sumps**

**3.3.21.5.3 Sump gratings**

**3.3.21.5.4 Sump leads**

**3.3.21.5.5 Secondary flow provisions**

**Add the following new sentence:**

Secondary flow paths to be shown on subdivision drawings.

**3.3.22 Add the following new clause:**

**3.3.22.1 Loading**

- a** Loading bays shall be designed and located so as to provide a safe position for loading and unloading of goods and providing access and egress without affecting any road or service lane.
- b** Loading bays shall be designed and located so as to:
  - i.** Promote use of the loading bay rather than the road side for loading and unloading of goods;
  - ii.** Minimise conflicts between traffic entering and leaving the site.
- c** The areas of the loading bay(s) shall be sufficient in size to cater for the largest expected vehicle, plus manoeuvring space around that vehicle.

*(Standards (a) to (c) above aim to ensure that the safe and efficient operation of roads is not impeded by the location of stationary service vehicles nor the manoeuvring of such vehicles. It is preferable that vehicle movement, to and from sites be in a forward direction where possible.)*

**3.3.22.2 Property Access**

New vehicle crossings, and existing vehicle crossings serving a new activity, shall meet the design standards in NZTA – Planning Policy Manual when all the following circumstances exist:

- i.** The road is a National route, (State Highway) primary arterial or secondary arterial (as defined on the Planning Maps); and
- ii.** The road has a speed limit of 100km/hr or more at the access location; and
- iii.** The activity concerned is a high traffic generating activity which, for the purpose of this standard, shall be defined as an activity which generates more than 30 car equivalent

movements per day (24 hour period) averaged over a normal week, where:

- 1 car to and from the site = 2 car equivalent movements
- 1 truck to and from the site = 6 car equivalent movements
- 1 truck and trailer to and from the site = 10 car equivalent movements
- 1 single residential dwelling = 8 car equivalent movements

**NZTA – Planning Policy Manual – For Integrated Planning and Development of State Highways – Appendix 5B.3; Accessway geometric design should be used in the above circumstances.**

*Generally, Diagrams D & E will be used depending on Table App 5B/4 – Accessway types.*

*NZTA standards for State Highway access design aims, to allow most new crossing places to be permitted activities, which requiring specific access design only in relation to high traffic generating activities seeking access to high speed arterial roads. The alternative of not having any controls over access for high traffic generating activities to high speed arterials is not appropriate for traffic safety and efficiency reasons. At the other extreme, the alternative of requiring a resource consent for all new accesses to state highways (regardless of nature and location of activity) is also not considered to be necessary or appropriate).*

**Note:** *That the WDC have rural vehicle crossings drawings which apply for vehicle movements less than 30 on minor rural roads.*

**Note:** NZTA approval is required for access onto State Highways under section 51 of the Government Roading Powers Act 1989.

### 3.3.22.3 Separation Distance Between Accesses

*Roads where speed limit is less than 70 km/hr:*

In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between accesses (either single or combined) on the same side of the road shall be:

- i. not less than 7.5 metres for residential land uses,
- ii. not less than 15 metres for all other land uses.

In relation to any road not covered by the paragraph above, there is no minimum standard for the minimum distance between accesses.

*Roads where speed limit is 70 km/hr or more:*

In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between successive accesses (regardless of the side of the road on which they are located) shall be not less than:

- i. 40 metres for 70 km/hr roads,
- ii. 100 metres for 80-90 km/hr roads,
- iii. 200 metres for 100 km/hr roads.

In relation to any road not covered by the paragraph above, there is no minimum standard for the minimum distance between accesses.

### Separation Distance Between Accesses and Intersections:

*Roads where speed limit is less than 70 km/hr:*

- k** In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 15 metres.
- l** In relation to any road not covered by (k) above, the minimum distance between an access and a road intersection shall be 10 metres, except that where the road intersects with a national route, primary arterial or secondary arterial, the minimum distance shall be 15 metres.
- m** The measurement of distances shall be taken from the nearest corner junction point of the road reserve boundaries at the intersection (or their projection in respect of "T" intersections) and shall be measured to the nearest edge of the access to the intersection.

*Roads where speed limit is 70 km/hr or more:*

- n** In relation to any state highway or other national route, primary arterial or secondary arterial (as defined on the Planning Maps), the minimum distance between an access and a road intersection shall be 100 metres.
- o** In relation to any road not covered by (n) above, the minimum distance between an access and a road intersection shall be 30 metres.
- p** The measurement of distances shall be taken from the intersection of the centrelines of the intersecting roads.

*(Standards (k) to (p) above aim to ensure that vehicle crossings are not located unduly close to road intersections, for traffic safety and efficiency reasons. The separation distance required increases with the speed environment and the nature of the road concerned.)*

## **3.4 Construction**

### **3.4.1 Introduction**

**Add the following new sentence:**

Construction work in the public road reserve shall comply with WDC's Street Opening Policy.

### **3.4.2 Materials for flexible pavements**

#### **3.4.2.1 Transition layer**

#### **3.4.2.2 Sub-base**

#### **3.4.2.3 Basecourse**

- (a) Shall apply in Wanganui, this precludes the use of shellrock.

### **3.4.3 Road Surfacing**

Clause (d) & (e) subject to specific approval.

### **3.4.4 Road surfacing materials**

#### **3.4.4.1 First and second coat chip seals**

**Replace first sentence with:**

The first coat seal shall consist of a grade 4 and 6 two coat seal.

Two seal coats shall be applied by the developer. The second seal coat shall be applied approximately 1 year after the first seal coat, ideally between 12 and 18 months after the first coat. The type of each seal coat shall be agreed with Council's Infrastructure Group prior to the work commencing.

#### **3.4.4.2 Double wet lock coat**

#### **3.4.4.3 Hot laid asphaltic concrete surfacing**

#### **3.4.4.4 Other asphaltic mixes**

#### **3.4.4.5 Concrete**

**Replace 1<sup>st</sup> paragraph, second sentence with:**

Concrete of not less than 30MPa 28 day strength shall be used for any road.

**Replace last sentence with:**

Concrete of not less than 20MPa 28-day strength shall be used for kerbs and channel and crossing slabs.

#### **3.4.4.6 Concrete pavers**

#### **3.4.5 Subgrade checking**

#### **3.4.6 Spreading and compaction of metal course aggregates**

### **3.4.7 Sub-base**

**Replace the last sentence of the second paragraph with:**

Sub-base shall be constructed in accordance with TNZ B/2 Specification.

### **3.4.8 Basecourse**

#### **3.4.9 Maintenance of basecourse**

#### **3.4.10 Basecourse preparation for surfacing**

#### **3.4.11 Deflection testing prior to surfacing**

### **3.4.12 Surfacing specification**

**Replace second sentence with:**

Asphaltic concrete construction shall comply with TNZ Specification P/9P.

#### **3.4.13 Bitumen application rate**

#### **3.4.14 Footpaths**

##### **3.4.14.1 Concrete**

Penultimate paragraph. **Delete second sentence.**

##### **3.4.14.2 Asphaltic concrete**

**3.4.14.3 Concrete pavers**

**Add the following new sentence:**

Block paving shall not be used.

**3.4.14.4 Surface finish, tolerances**

**Add the following new sentence:**

Coloured concrete and stamped concrete shall not be used.

**3.4.15 Kerb and channel**

**Add the following new sentence:**

Coloured concrete and stamped concrete shall not be used.

**3.4.16 Berms and landscaping**

**3.4.17 Road surface tolerances and texture**

**3.4.18 Surface finish and tolerances on kerbs, paths and accessways**

**Add the following new sentence:**

Coloured concrete and stamped concrete shall not be used.

**3.4.18.1 Kerbs and channel**

**3.4.18.2 Paths, accessways**

**3.4.19 Progress inspections**

**3.4.20 Installation of traffic services, road furniture, benchmarks**

**3.4.21 As-built and completion documentation**

**Add the following new paragraph:**

On completion of the physical works, and before acceptance of the works by WDC, the developer shall submit a full set of As-Built drawings of the works to Council in accordance with 1.5.2.1.

The As-Built drawings shall include the full detail required by WDC to inventory, locate and maintain the works, along with the manuals necessary to operate plant, signals or other devices.

As-Built drawings may take the form of construction drawings modified to account for amendments or refinements in the field, but shall be clearly labelled as "As-Built" and certified as an accurate post-construction record.

See Appendix J: Schedule 1D As-Built Plans and Documents for WDC requirements.

## PART 4: STORMWATER DRAINAGE

### 4.1 Scope 4.2 General

#### 4.2.1 Objectives

Add the following new sentence after the 2<sup>nd</sup> paragraph:

Note that the Wanganui District Council promotes the use of 'On-site Stormwater Management Guideline' document for sustainable stormwater design solutions. This document was published by the Ministry for the Environment and NZWERF in October 2004. This document is available for free download from the Water NZ website.

- 4.2.2 Legislation
- 4.2.3 Local authorities' requirements
- 4.2.3.1 Authorization from the regional council
- 4.2.3.2 Exercising permits
- 4.2.4 Catchment management planning
- 4.2.5 Effects of land use on receiving waters
- 4.2.6 System components
- 4.2.7 Alternative stormwater systems
- 4.2.8 Catchments and off-site effects
- 4.2.9 Stormwater pipelines and waterways
- 4.2.9.1 Stormwater pumping
- 4.2.9.2 Materials
- 4.2.9.3 Rural areas

### 4.3 Design

- 4.3.1 Approval of proposed works
- 4.3.1.1 Approval process for stormwater drainage works
- 4.3.1.2 Information to be provided
- 4.3.2 System Design

- 4.3.2.1(e) The designer  
Alteration – Incorrect reference:

Drawing WS-003 should read drawing WW-002

- 4.3.2.2 Separate system
- 4.3.2.3 Primary and secondary systems
- 4.3.2.4 Secondary flow paths
- 4.3.2.5 Minimum protection standards
- 4.3.2.5.1 Design storms

Table 4.1 Recommended AEP for design storms

Function	AEP (%)	Return Period (years)
Primary systems:		
Rural	20	5
Residential and rural residential areas	10	10
Commercial and industrial areas	10	10
All areas where no secondary flow path is available	1	100
Secondary systems	1	100

- 4.3.2.5.2 **Freeboard**
- 4.3.2.5.3 **Tidal areas**
- 4.3.2.5.4 **Bridges and culverts**
- 4.3.3 **Pipelines and culverts**
- 4.3.3.1 **Location and alignment of stormwater mains**

#### 4.3.3.2 **Pipe Materials**

**Add the following paragraphs:**

Roller Compacted concrete pipes (RCP) shall only be used if it can be shown and verified that each individual pipe has passed the factory hydrostatic test.

PVC pipes and fittings shall be rubber-ring jointed complying with AS/NZS 1260 for foul sewers and AS 1254 for stormwater sewers. Class SN4 is generally acceptable.

PVC-U pipes and fittings shall be used in all areas where sewer connections are required to be made to the constructed pipeline.

Stormboss pipe will be accepted by the WDC.

Slip couplings shall only be used with the approval of the Authorised Officer.

#### 4.3.3.3 **Building over pipelines**

#### **Table 4.2 Acceptable pipe materials**

See Table 4.2 in Appendix G.

#### 4.3.3.4 **Pipeline connections**

**Paragraph 1 – remove the words:**

“and the distance from the connection to the closest inspection point is not greater than 11 m.”

(Note: The second paragraph in NZS 4404 should still apply).

#### 4.3.3.5 **Minimum pipe sizes**

**Minimum cover**

WDC accepts the minimum cover requirements of AS/NZS 2566 for flexible pipelines.

#### 4.3.3.7 **Gradients and acceptable flow velocities**

#### 4.3.3.8 **Backflow effects**

#### 4.3.3.9 **Culverts**

**Add the following new paragraph after the 4<sup>th</sup> paragraph:**

The Council accepts headwalls constructed of concrete filled bags for culverts less than DN375. All culverts DN375 and over will require precast headwalls. See drawing RD-WDC-012 in Appendix A.

#### 4.3.3.10 **Inlets and outlets**



**4.3.3.11 Subsoil drains**

**Add the following paragraph:**

The developer needs to check with WDC's approved Product List or apply for a new product to be added at the developers expense.

See drawing CM-WDC-023 & CM-WDC-024 in Appendix A for subsoil details

**Note:** Wanganui is prone to iron ochre effecting subsoil drains. Where the water table is high and subsoil drains are necessary Council advice should be sought. WDC have specific requirements for subsoil drains to minimise difficulties associated with the presence of the iron ochre. These requirements may include the use of special vitrified clay subsoil pipes. WDC has a supply of these pipes and will sell them to developers for use in the iron ochre prone areas.

- 4.3.3.12 Seismic design**
- 4.3.3.13 Geotechnical investigations**
- 4.3.3.14 Bulkheads**
- 4.3.4 Manholes**

**4.3.4.1 Standard manholes**

**Replace the last paragraph with the following new paragraph:**

Refer to drawing CM-WDC-004 and CM-WDC-015 for manhole details.  
(Appendix A)

**4.3.4.2 Manhole materials**

**Replace paragraph one with the following new paragraph:**

MH may be manufactured in reinforced concrete, or from suitable materials as approved by the Wanganui District Council.

- 4.3.4.3 Size of manholes**
- 4.3.4.4 Shallow manholes**
- 4.3.4.5 Manhole connections**
- 4.3.4.6 Access**

- 4.3.5 Waterways**
  - 4.3.5.1 Constructed waterways**
  - 4.3.5.2 Natural waterways**
- 4.3.6 Water quantity and quality control**
- 4.3.7 Connection to the public system**

**4.3.7.1(a) Individual lots and developments**

**Add the following to the clause:**

In a Greenfield site, all lot connections shall be to a main or swale<sup>232</sup>

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<sup>232</sup> S28

**4.3.7.1(e) Individual lots and developments**

**Replace clause with the following:**

- (i) 90mm for internal lots

**4.3.7.1(h) Individual lots and developments**

**Replace clause with the following:**

Connection to an alternative stormwater disposal system such as vegetated swales, soakpits, or soakage basins is acceptable provided the system is authorised by the WDC and adverse effects and potential nuisances are addressed;

**4.3.7.1(k) Individual lots and developments**

**Add the following new clause:**

The principle of the ownership and responsibility for stormwater drains apply similarly to the sanitary sewer drawings prepared in Appendix A.

See drawings CM-WDC-018, CM-WDC-019, CM-WDC-020, CM-WDC-021 and CM-WDC-022 in Appendix A.

**Note:** For stormwater application ignore the rodding eye notes on the sanitary sewer drawings.

**4.3.7.2 Connection of lateral pipelines to mains**

**4.3.8 Stormwater disposal**

**4.3.8.1 Approved outfall**

**4.3.8.2 Soak pits**

**Add the following new paragraph:**

Guidance on soak pits is also contained within WDC's Stormwater Separation Guide.

**4.3.9 Easements**

**4.3.10 Fencing and safety**

**4.3.10.1 Fencing**

**4.3.10.2 Health and Safety**

**4.3.11 Developer contributions**

**4.3.12 Means of compliance**

**4.3.12.1 Surface water**

**4.3.12.2 Estimation of surface water run-off**

**4.3.12.2.1 Large catchments**

**Replace clause with the following:**

For catchment areas greater than 100 ha or smaller catchments with significant storage elements (eg ponds, wetlands, and basins) surface water run-off shall be determined by unsteady flow modelling or an alternative method agreed to by WDC for each specific case.

#### 4.3.12.2.2 Rainfall intensity and time of concentration

Replace clause with the following:

Estimated depth-duration-frequency table for Wanganui at 2050

Rainfall Depths (mm)										
ARI (yr)	Duration									
	10m	20m	30m	1 hr	2 hr	6 hr	12 hr	24 hr	48 hr	72 hr
2	8.0	11.6	13.8	18.2	23.0	34.6	44.0	55.0	64.5	70.5
5	11.2	16.2	19.4	24.9	29.9	44.0	55.6	71.8	82.0	88.4
10	13.3	19.3	23.2	29.4	34.5	50.2	63.1	82.8	93.8	100.3
20	15.3	22.2	26.7	33.8	38.9	56.2	70.5	93.5	104.9	111.7
30	16.5	23.9	28.7	36.2	41.4	59.6	74.7	99.6	111.4	118.3
50	18.0	25.9	31.2	39.3	44.6	63.8	80.0	107.2	119.4	126.5
60	18.6	26.7	32.2	40.5	45.7	65.4	81.9	110.0	122.4	129.4
70	19.0	27.3	33.0	41.4	46.6	66.7	83.5	112.3	124.8	131.9
80	19.3	27.9	33.6	42.2	47.5	67.7	84.9	114.2	126.9	134.0
90	19.7	28.3	34.1	43.0	48.2	68.8	86.1	116.0	128.7	135.9
100	20.0	28.7	34.7	43.6	48.9	69.6	87.2	117.6	130.4	137.6

#### 4.3.12.3 Sizing of the stormwater drainage system

##### 4.3.12.3.1 Pipe flow

##### 4.3.12.3.2 Energy loss through structures

##### 4.3.12.3.3 Determination of water surface profiles

Figure 4.1 Part full pipe flow data

Table 4.3 Loss coefficients for bends

Figure 4.2 Typical stormwater catchment

Figure 4.3 Sump to manhole connection

Table 4.4 Backwater calculation for surcharged stormwater systems

##### 4.3.12.3.4 Outfall water levels

#### 4.3.12.4 Manholes

##### 4.3.12.4.1 Hydraulic flow in manholes

##### 4.3.12.4.2 Angle of connection

#### 4.3.12.5 Waterways

##### 4.3.12.5.1 Manning's 'n'

#### 4.3.12.6 Outlets

#### 4.3.12.7 Stormwater quality control

#### 4.3.12.8 Subsoil drains

### 4.4 Construction

#### 4.4.1 Construction standard specifications

Replace the clause with the following:

Construction shall be carried out in accordance with the WDC standard construction specifications.

#### Low Impact Design

Low impact design aims to use natural processes such as vegetation and soil media to provide stormwater management solutions as well as adding value to urban environments. The main principles of low impact design are reducing

stormwater generation by reducing impervious areas, minimising site disturbance, and avoiding discharge of contaminants. Stormwater should be managed as close to the point of origin as possible to minimise collection and conveyance. Benefits include limiting discharges of silt, suspended solids, and other pollutants into receiving waters, and protecting and enhancing natural waterways.

Effective implementation of LID principles typically requires more planning and design input than pipes stormwater systems. Aspects in the design process requiring specific consideration include provision of secondary flow paths, land requirements, and provision for effective operation and maintenance.

*Useful guidance on low impact design practices can be found in the following Auckland Regional Council (ARC) publications: "Low impact design manual for the Auckland region, Technical Publication 124; 'Application of low impact design to brownfield sites, Technical Report 2008-20'; and 'Integration of low impact design, urban design and urban form principles, Technical Report 2009-83'.*

### **Low impact design stormwater system**

Low impact design is a type of stormwater system that aims to minimise environmental impacts by:

- (a) Reducing peak flow discharges by flow attenuation;
- (b) Eliminating or reducing discharges by infiltration or soakage;
- (c) Improving water quality by filtration;
- (d) Installing detention devices for beneficial reuse.

### **Low impact design process**

Key design considerations include:

- (a) Design objective. The need to be clear about what is being designed for is important to informing decisions on the type of device and maintenance approach that is appropriate in a given context. Low impact devices offer many opportunities to deliver multiple outcomes in addition to their stormwater functionality;
- (b) Device selection. The proper design and position of a product or device within the stormwater treatment train is important. It is critical to select a device or product that is fit for purpose, robust, and effective for delivering the design objective over its design life. Problems with the operation and maintenance of a device can occur when it is inappropriate for a given location or is undersized for its purpose. The respective position of the various components in the treatment train is an important consideration in ensuring the sustained effectiveness of the system;
- (c) Integrated approach. Ensure that those who will become responsible for the ongoing operation and maintenance of low impact devices are involved in the design process. This is critical to informing the development of a practical design that will enable ease of maintenance and develop ownership for ensuring the device performs as it was intended;
- (d) Design for maintenance. Maintenance of devices shall be considered early in the design process. This will assist in the identification of features that will facilitate the ease and efficiency of ongoing operation and maintenance devices. Elements to consider in the design for the maintenance and operation of the systems include:
  - i) Access
  - ii) Vegetation
  - iii) Mulch

- iv) Sediment
- v) Mechanical components
- vi) Vandalism and safety

#### **Low impact design devices**

The types of low impact design devices that could be considered for use include:

- (a) Detention ponds;
- (b) Wetlands;
- (c) Vegetated swales;
- (d) Rain gardens;
- (e) Rainwater tanks;
- (f) Soakage pits;
- (g) Filter strips;
- (h) Infiltration trenches/ basins;
- (i) Permeable paving;
- (j) Green roofs;
- (k) Tree pits

#### **Detention ponds**

Stormwater ponds are an accepted method of improving stormwater quality and reducing peak downstream flow rates to replicate the pre-development hydrological regime.

Detention ponds can be of the 'dry' or 'wet' type and can be 'on-line' or 'off-line'. The type of pond required should be discussed with the LA at an early stage.

Specific matters to be considered in the pond design include:

- (a) Side slope stability;
- (b) Shallow ledges or batters for safety;
- (c) Ease of access and maintenance including mowing and silt clean out;
- (d) Shape and contour for amenity and habitat value;
- (e) Effectiveness of inlet and outlet structures;
- (f) Overflow design and scour protection;
- (g) Fish passage;
- (h) Pest control (for example mosquitoes and blue-green algae);
- (i) Potential effect on downstream aquatic ecology and habitat;
- (k) Maintenance requirements.

If the TA is to be responsible for pond maintenance it shall be located on land owned by, or to be vested in, the TA or protected by an appropriate easement.

#### **Wetlands**

Constructed wetlands can be designed to provide flood protection, flow attenuation, water quality improvement, recreational and landscape amenity, and provision for wildlife habitat.

Specific matters to be considered in wetland design include:

- (a) Catchment area greater than 1 ha;
- (b) Size calculated to achieve water quality volume;
- (c) Forebay to capture coarse sediments;
- (d) Depth not to exceed 1m;
- (e) Sufficient hydraulic capacity for flood flows;
- (f) Sufficient detention time for sediment retention;
- (g) Species to be planted.

If the TA is to be responsible for wetlands maintenance it shall be located on land owned by, or to be vested in, the TA or protected by an appropriate easement.

### **Vegetated swales**

Vegetated swales are stormwater channels that are often located alongside roads or in reserves. While their primary function is conveyance, filtration through the vegetation provides some water quality treatment.

Specific matters to be considered in swale design include:

- (a) Catchment area not greater than 4 ha;
- (b) Longitudinal slope 1% - 5%;
- (c) Slopes flatter than 1% may require underdrains;
- (d) Slopes greater than 5% may require check dams to reduce effective gradient to less than 5%.
- (e) Capacity for a 10% AEP event;
- (f) Velocity not greater than 1.5m/s in a 10% AEP event unless erosion protection is provided;
- (g) Grass length 5-mm-100mm;
- (h) Species to be planted.

An option for swales with very flat longitudinal slopes and high water tables is a wetland swale.

Typical details that may be used in swale design are shown in figures 3.6(A); 3.6(B) and 3.6(C).

### **Rain gardens**

Rain gardens are engineered bioretention systems designed to use the natural ability of flora and soils to reduce stormwater volumes, peak flows and contamination loads. Rain gardens also provide value through attractive design and planning. Specific matters to be considered in rain garden design include:

- (a) System designed to manage a 10% AEP event without significant scour or erosion;
- (b) Overland flow paths to accommodate flows in excess of the design storm;
- (c) Entry and overflow positions to restrict short circuiting;
- (d) Geotextile on side walls;
- (e) An underdrain with a minimum of 50mm gravel cover;
- (f) Pavement design in vicinity of device;

- (g) Soil composition;
- (h) A ponding area;
- (i) Species to be planted;
- (j) Access for maintenance.

### **Rainwater tanks**

Rainwater tanks can be designed to harvest water for non-potable uses such as toilet flushing and watering the garden. This can significantly reduce the demand on the potable water supply from the TA. Where required by the TA rainwater tanks can be configured to provide peak flow attenuation, to reduce stream channel erosion and the load on the stormwater system, with or without reuse.

Specific matters to be considered in rainwater tank design include:

- (a) Capacity; typical 2,000L – 5,000L for domestic re-use and 6,000L -9,000L for dual re-use and attenuation;
- (b) Primary screening to keep out leaves and other coarse debris;
- (c) First-flush diverters to collect first 0.4mm for slow release to ground through a small chamber;
- (d) Backflow prevention;
- (e) Low level mains top-up valve;
- (f) Overflow outlet;
  
- (g) Gravity or pumped;
- (h) Tight-fitting cover;
- (i) Cool location;
- (j) Aesthetics and convenience.

### **Soakage devices**

Soakage devices such as soak pits and soak holes, filter strips, infiltration trenches/ basins, permeable paving, green roofs, and tree pits can also be considered for managing stormwater from roofs, parking areas, and roads.

Specific matters to be considered in a soakage system include:

- (a) Capacity adequate for a 10% AEP event;
- (b) Rate of soakage determined through a soakage test with an appropriate reduction factor (at least 0.5) applied to accommodate loss of performance over time;
- (c) Capacity to accommodate the maximum potential impermeable area;
- (d) Overland flow paths to accommodate flows in excess of the design storm;
- (e) Confirmation that the soakage system will not have an adverse effect on surrounding land and properties from land stability, seepage, or overland flow issues;
- (f) Soakage system to be located above static groundwater level;
- (g) Pre-treatment device to minimise silt ingress may be required;
- (h) Interception of hydrocarbons;
- (i) Access for maintenance.

For guidance on disposal using soakage on individual lots refer to NZBC clause E1/VM1.

The TA may require a geotechnical assessment to be carried out by an appropriately qualified geo-professional to determine the suitability of soil and groundwater characteristics for any proposed soakage system.

A discharge permit may be required from the regional council for discharge to soakage.

*National and international references that may be able to be used in the design and maintenance of such systems are listed in Reference Documents and Related Documents.*

Subject to peer review and TA.

**4.4.2 Pipeline construction**

The construction of pipelines shall be carried out in accordance with the requirements of AS/NZS 2566 Part 1 and Part 2, AS/NZS 2032 (PVC pipes), AS/NZS3725 (concrete pipes) and AS/NZS 2033 (PE Pipes).

**4.4.3 Trenching**

**4.4.4 Reinstatement**

**4.4.5 Earthworks, erosion and sediment control**

**4.4.6 Testing**

Refer Section 4.8, Tech Specs, Appendix 1.



## **PART 9: POWER, TELECOMMUNICATIONS, GAS**

### **9.1 Scope**

This section sets out requirements for the provision of stormwater, wastewater and water supply systems, power, telecommunications and gas, and their locations in the road. The scope of these provisions applies to both future and existing roads and applies equally to all network services.

Note – Network utility services in roads are subject to the Utilities Access Act 2010 and the Infrastructure (Amendments Relating to Utilities Access) Act 2010.

### **9.2 General**

#### **9.2.1 Legislation**

References legislation and documents are listed in the Referenced Documents section of this Standard.

#### **9.2.2 Definitions**

For the purpose of section 9, the following definitions shall apply:

**Code** Means the national code of practice approved in accordance with the Utilities Access Act 2010.

**Corridor Manager** Has the same meaning given to it by the Utilities Access Act 2010.

#### **9.2.3 Context**

The developer is required to make all arrangement with the appropriate network utility operators for the supply and installation of stormwater, wastewater, water supply and electric power and to the extent applicable for the provision of telecommunication and gas reticulation.

The developer shall provide satisfactory evidence to the TA corridor manager that the network utility operators are prepared to reticulate the subdivision and that agreement on the financial arrangements for the installation of each supply has been reached. The following applies to each utility:

- (a) Stormwater, wastewater and water supply. Where water supply and wastewater pipes, and stormwater systems are in the road reserve, they shall be installed at the time of road construction to the requirements of the TA corridor manager and the water supply authority for water pipes, or the TA for wastewater pipes and stormwater systems;
- (b) Electric power. The supply of electric power will generally be by means of an underground system. Ducts shall be installed at the time of the road construction to the requirements of the electrical supply authority and TA corridor manager. Where the developer is intending to provide electric power other than by underground system; the developer shall provide alternative supply arrangements for approval of the TA;
- (c) Telecommunications. Arrangements shall be made with the telecommunication supplier for the reticulation of telecommunication facilities. Where only part of this reticulation is being supplied initially the arrangements shall include the requisite space being maintained for the installation of the remainder of the reticulation at a later date. Ducts will be supplied ~~to the subdividing by the~~<sup>233</sup> developer at the time of road

construction for installation in the carriageway formation to the requirements of the telecommunication supplier and the TA corridor manager.

Developers to supply Telecom Completion Certificate prior to applying for the 224 Certificate from Council. This is required where Telecommunications are required as part of Resource Consent Conditions.

- (d) Gas. Where an existing gas supply is available or likely to be available to serve a subdivision, the developer may make appropriate arrangements with the gas supply authority and the TA corridor manager, and at the time of road construction, install such ducts/ pipes as may be required.

The developer should consult with gas utility as early as possible in the subdivision process. Experience in Wanganui District has indicated that gas has often been an “after thought” which inhibits an efficient trenching and pipe laying process.

The developer shall follow the requirements of the Code to the extent that they apply to the utility installation for the development.

## 9.3 Design

### 9.3.1 Plans

Copies of the plans of the development/ subdivision shall be forwarded by the developer to all the affected network utility operators at an early date to facilitate the design of the reticulation.

#### **C9.3.1**

*It is important that all of the affected network utility operators are advised by the developer of any amendments to the development plan. Information when available on the type of dwellings and likelihood of more than one dwelling on any lot, will be valuable for design purposes.*

- 9.3.1.1 In preparing the engineering plans consideration shall be given to the requirements of the network utility operators and the TA corridor manager for:

- (a) Minimum cover to cables and pipes;
- (b) The network utility operator’s desired position for the cable and piping within the road berm as agreed with the TA corridor manager;
- (c) The minimum separation distances between power or telecommunication cables, and gas or water mains.
- (d) The width of berm which shall be clear of other services and obstructions to enable efficient cable-laying operations.
- (e) Gas trench specifications are as specified in NZS 5258:2003, Gas Distribution.

#### **C9.3.1.1**

*Reference should be made to each network utility operator and the TA corridor manager for their specific requirements. Refer to the Code for further information.*

### 9.3.2 Utilities above ground

Utilities should preferably be sited within the road berm or on land which will legally become part of the road but which is set back outside the normal road line. Alternatively separate lots (public utility reserves) or easements over private property may be used. If there are any concerns raised about the safety of above

ground structures, the risk should be assessed in accordance with the requirements of the Code and any significant risks mitigated.

## 9.4 Construction

### 9.4.1 Underground cabling

Underground cable laying shall be achieved by the most appropriate method considering the nature of subsoil and potential damage to the infrastructure and shall be to the approval of the TA corridor manager.

#### C9.4.1

*The trenchless method is preferred in existing urban areas for underground cabling. Refer to the Code for further information.*

### 9.4.2 Materials

Materials and sizes of ducts and pipes shall comply with the requirements of the network utility operators and the colours should be in accordance with the Department of Labour's *Guide for safety with underground services*.

### 9.4.3 Conversion to underground on existing roads

Where a proposed subdivision fronts on to an existing road, the conversion of overhead reticulation to underground will in some instances be desirable. Agreement on the feasibility and benefit shall be first agreed between the network utility operator and the TA.

### 9.4.4 Industrial and commercial subdivisions

The servicing requirements for commercial and industrial areas are often indeterminate. Close liaison between the developer and the network utility operator is advisable, particularly immediately before cabling is installed so that changes can be incorporated to accommodate extra sites or the requirements of a particular industry.

~~Telecom~~ Telecommunication<sup>234</sup> ducts always installed in industrial/ commercial areas so future customers only require ~~Telecom~~ Telecommunications companies<sup>235</sup> to pull-in and joint cables.

Note: WDC will be requesting the utility provider to certify that the developer has installed the service to the utility's satisfaction.

### 9.4.5 Location of services

#### 9.4.5.1 Position in the road

Position and depth shall be agreed with the appropriate network utility operator and the TA corridor manager in accordance with the provisions of the Code.

#### 9.4.5.2 Recording of underground services

TAs shall maintain a procedure for recording the location of their underground services on plans which are readily available to the public at the TA office. It is unlikely that the TA will be able to provide a service for utility services other than those for which it is immediately responsible. These will usually be stormwater, wastewater, and water supply. Other authorities or network utility operators are required to maintain similar records of the existence and detailed location of their services for ready reference.

#### 9.4.5.3 Accuracy and tolerance

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<sup>234</sup> S16

<sup>235</sup> S16

It is essential that all services be laid to predictable lines if there is to be a reasonable opportunity of laying new services in existing systems. In addition to specifying the location of any service in the road berm, there should also be a tolerance which shall on no account be exceeded without proper measurement and recording on the detailed record plan. Tolerance of  $\pm 300\text{mm}$  in the horizontal and  $\pm 100\text{mm}$  in the vertical is a practicable requirement.

#### **9.4.6 Trenches**

**9.4.6.1** When new subdivision construction is undertaken the backfilling and compaction of trenches to a state of stability consistent with the future of the surface shall be carried out in accordance with the Code and to the satisfaction of the TA corridor manager.

**9.4.6.2** Where underground services are laid after the initial construction of the subdivision or where they are extended from an existing area into a new one, special attention shall be given to the opening and reinstatement of trenches in accordance with the Code and to the satisfaction of the TA corridor manager.

#### **C9.4.6**

*TAs are recommended to prepare standard specifications for the opening of trenches and the restoration of surfaces. Network utility operators are in turn recommended to comply with the requirements of such specifications.*

*Refer to the Code for further guidance.*