

PART 1: GENERAL REQUIREMENTS AND PROCEDURES

1.1 Scope

This document shall be read in conjunction with NZS4404:2010

Delete last sentence of C1.1 and replace with:

For these purposes, refer to the Whanganui District Council District Plan.

1.2 Interpretation

1.2.1 General

1.2.2 Definitions ~~Statutory requirements~~

Add to the end of first sentence:

...and plural words have the same definition of singular words:

Add the following new definitions:

- AUTHORISED OFFICER – the Authorised Officer for Wanganui District Council for approving engineering plans is the Council's Subdivision Engineer or as delegated by Whanganui District Council.
- 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.
- DEVELOPERS SITE REPRESENTATIVE - means a professional engineer or engineering technician appointed by the Developer, and accepted by the Whanganui District Council, to supervise the development works on his behalf.
- EARTHWORKS: area greater than 100m² 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.
- SUITABLY QUALIFIED DESIGN PROFESSIONAL - As defined in the "Guidance on Use of Producer Statements" document – See Appendix k.
- SUITABLY QUALIFIED PROFESSIONAL – See above.

Note

This Document shall be read in conjunction with NZS 4404 : 2004.

1.2.3 Abbreviations ~~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.~~

Commented [SC1]: Not in new 4404

- ~~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 100m² 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.

Commented [SC2]: Now defined in 4404

Commented [SC3]: Now defined in 4404

Commented [SC4]: Now defined in 4404

Commented [SC5]: Now defined in 4404

Commented [SC6]: Now defined in 4404

Commented [SC7]: Now defined in 4404

Commented [SC8]: Now defined in 4404

Commented [SC9]: Now defined in 4404

Commented [SC10]: Now defined in 4404

- ~~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.

Commented [SC11]: Now defined in 4404

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/m³~~ — 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

Commented [SC12]: In definitions in 4404

Commented [SC13]: In definitions in 4404

- ~~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~~
- ~~Sec – socket~~
- ~~STP – specified test pressure~~
- ~~vpd – vehicles per day~~

Commented [SC14]: All now in abbreviations in 4404

1.3 ~~Context Relationship with Resource Management Act 1991 and Building Act 2004~~

1.3.1 ~~Resource Management Act~~

Add the following new clause:

~~The protection of historic heritage from inappropriate subdivision, use and development is a matter of national importance under s.6(f) of the RMA. The RMA's definition of historic heritage includes: historic sites, structures, places, and areas; archaeological sites; sites of significance to Maori including wahi tapu; and surroundings associated with the natural and physical resources. Therefore regional/district plans should be reviewed to ascertain whether any development proposal affects historic heritage. Most plans have a historic heritage schedule, which lists the item protected, its location, and its sensitivity. A precautionary approach should be taken prior to any land development and subdivision infrastructure affecting historic heritage, with the LA consulted at the earliest stage (see 1.3.2).~~

~~Where applications for resource consents may affect sites of significance to Maori, consultation with the appropriate tangata whenua groups should occur prior to finalising plans or submitting applications for resource consent in order to give effect to Part II of the RMA.~~

Commented [SC15]: Now in 1.3.1 in 4404

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.~~

~~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), 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.~~

Commented [SC16]: HPA now explained in 4404

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.

Commented [SC17]: Now covered in 4404

1.4 Low Impact Design Requirements for design and construction

1.4.1 Investigation and Design

Add the following new clause:

The developer's designer shall to be confirmed and accepted in writing with WDC prior to design commencing:

Commented [SC18]: Moved to 1.7

1.5 Climate Change Approval of design and construction

Replace:

"proposed 'New Zealand coastal policy statement' (policy 52)" with "New Zealand Coastal Policy Statement 2010 (policy 25)".

Commented [SC19]: New. Reflects operative nature of the NZCPS, previous climate change section at 1.12

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.~~

Commented [SC20]: Deleted. Covered in 4404 in slightly different wording

1.5.2 Drawings

1.5.2.1 General

Add the following:

1. See legend of line type and symbols in Appendix A.

Commented [SC21]: Now in 1.8.2.4

1.5.2.1 General

Add the following sentence:

As Built drawings shall be submitted in accordance with Appendix J of this document.

Commented [SC22]: No in 1.8.2.5.1

1.5.2.2 Composition of drawings

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.

Commented [SC23]: Now in 1.8.2.5.2

Note:

**Moturiki 00 = City Datum 100.06 so
Moturiki level = City level – 100.06**

Commented [SC24]: Deleted

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 2nd 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.

Commented [SC25]: Now 1.8.2.5.3

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.

Commented [SC26]: Now 1.8.2.5.4

1.5.2.3 Scale

Add the following sentence:

WDC requires plans to be in 1:500 scale.

Commented [SC27]: Now included in 4404. Deleted

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.

Commented [SC28]: Now 1.8.3.3

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.

Commented [SC29]: Now part of 4404

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.

Commented [SC30]: Now 1.8.4.1

1.5.4.2 Approval before commencing work

1.5.5 Notification of contracts and phases of work

Add the following

All CCTV and Testing of pipes, trenches, fill and roading formation submitted and approved by WDC prior to sealing of road.

Commented [SC31]: Now 1.8.5.2

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.

Commented [SC32]: Now covered in 4404

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 Urban design protocol Bonds and charges

1.7 Requirements for design and construction Add the following new clause:

1.7.1 Investigation and design

Add the following new clause:

(d) The developer's designer shall to be confirmed and accepted in writing with Whanganui District Council prior to design commencing.

Commented [SC33]: Moved from 1.4.1

1.7.2 Construction

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.

Commented [SC34]: Now at 1.8.9

1.8 Approval of design and construction ~~Add the following new clause:~~

1.8.2.4 Content of drawings

Add the following:

See legend of line type and symbols in Appendix A.

Commented [SC35]: Was 1.5.2.1

1.8.2.5 Recording of Infrastructure – As-built information

1.8.2.5.1 As Built drawings shall be submitted in accordance with Appendix J of this document

Commented [SC36]: Was 1.5.2.1

1.8.2.5.2 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.

City datum

New Zealand Vertical Datum 2009 (NZVD 2009)

Note: NZVD 2009 = Moturiki 1953 + 0.24m; or
NZVD 2009 = City Datum + 0.30m

The recognised LINZ mean sea level datum i.e. Moturiki Datum 1953 or Wellington Level Datum 1953 or New Zealand Geodetic Datum 2000 (NZGD2000)

Assumed datum with easily recognised origin (i.e. Manhole lid and invert level)

A local peg is only acceptable in rural areas.

Commented [SC37]: Was 1.5.2.2

1.8.2.5.3 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 Whanganui 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 2nd Order Standards. The level is to be shown in

Whanganui City Datum on the as built plans supplied to the Whanganui District Council 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.

Commented [SC38]: Was 1.5.2.2

1.8.2.5.4 Detail plans are required for each service on a separate sheet. A general arrangement plan to show all services without detailed information shall also be provided. The drawings shall be submitted in PDF and DXF format. The format of the DXF file must be identified when submitting.

Commented [SC39]: Was 1.5.2.2(b)

1.8.3.3 Life cycle costing

Add the following clause:

Whanganui District Council require that the designer ensure that their design promotes minimum maintenance costs. This applies to all references relating to lifecycle cost throughout NZS 4404.

Commented [SC40]: Was part of 1.5.3.3

1.8.3 Approval of design

1.8.4.1 Add the following clauses:

The Whanganui District Council require 3 sets of drawings for approval. One signed approved set will be returned to the developer. This matches the Building Consent approval process.

Commented [SC41]: Was 1.5.4.1

Rail

Subdivisions adjoining or crossing a rail line will require the necessary approval from KiwiRail (New Zealand Railways Corporation).

Airports

Subdivisions adjoining or crossing an airport will require the necessary approval from the Airport Authority.

State Highway

Subdivisions adjoining or crossing a state highway will require the necessary approval from the New Zealand Transport Agency.

Commented [SC42]: Was 1.9

1.8.4.2 Approval before commencing construction

Add the following clause:

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.

Commented [SC43]: Was 1.10

1.8.5.2

Add the following clause:

All CCTV and Testing of pipes, trenches, fill and road formation shall be submitted and approved by Whanganui District Council prior to sealing of road.

Commented [SC44]: Was 1.5.5

1.8.4 Maintenance

Add the following clause:

The Whanganui District Council 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. Whanganui District Council 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.

Commented [SC45]: Was 1.7

1.8 Levels of Service

~~For Levels of Service refer to the WDC Ten Year Plan, Volume 2, Annual Plan, Policies.~~

Commented [SC46]: Deleted

1.9 Bonds and charges 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 (Zealand Railways Corporation).~~

Commented [SC47]: Now 1.8.4.1

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.~~

Commented [SC48]: Now 1.8.4.1

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.~~

Commented [SC49]: Now 1.8.4.2

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.~~

Commented [SC50]: Deleted – Now in 4404 (section 1.4)

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.~~

~~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 62) 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 sea level rise' and a 'National policy statement on flood risk'. These would not take effect until they are gazetted.~~

Commented [SC51]: Now at 1.5, included in 4404

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.~~

Commented [SC52]: Deleted – now in 4404 (section 1.6)