

## FOREWORD

I am pleased to issue this updated 2011 edition of the Code of Practice for Land Development (the Code) published by the Wellington City Council. The Code is a guide on the standards required by the Wellington City Council. The Code sets out the technical engineering criteria for approving the design and construction of developments. Whether the infrastructure will be vested with Council or be a private asset it is important that these assets are constructed to the Council's standards.

This 2011 Code of Practice for Land Development is a revision of the former Code of Practice for Land Development 1994. It has been updated and improved, and the key changes include encouraging environmentally sustainable design, strengthened sediment and erosion control and a new Open Spaces chapter.

The standards set out in this Code of Practice in relation to water supply, wastewater and stormwater design and construction must be met before the Council will allow a property to be connected to the City's water supply and wastewater system.

Alternatives to the water supply and wastewater design and construction standards set out in this Code will not be permitted.

However, it is not the intention of the Council to stifle innovation and ingenuity of design. Where the outcome will be a better quality living environment, proposed alternative solutions for infrastructure design, other than for water supply and wastewater, should be negotiated with the Council to ensure that the Code's basic requirements are met.

Reference to this Code of Practice is contained in the Council's District Plan, including the Design Guidelines. The requirements of this Code of Practice are enforceable under the Resource Management Act 1991, the Building Act 2004 and the Wellington Consolidated Bylaw 1991.

The Code is updated from time to time by Council and new editions will be marked with the revised date issued on each occasion.

A handwritten signature in black ink, appearing to read 'Stavros Michael', with a long horizontal line extending to the right.

Stavros Michael  
Director, Infrastructure

# CONTENTS

	<b>PAGE/ CHAPTER</b>
<b>FOREWORD</b>	<b>1</b>
<b>RECORD OF AMENDMENTS</b>	<b>3</b>
<b>RELATED DOCUMENTS</b>	<b>4</b>
New Zealand Standards	4
British Standards	7
Transit New Zealand Standards	7
Statutes	8
Other Documents	9
<b>DEFINITIONS</b>	<b>11</b>
<b>GENERAL SUBDIVISION PRACTICE</b>	<b>A</b>
<b>EARTHWORKS DESIGN AND CONSTRUCTION</b>	<b>B</b>
<b>ROAD DESIGN AND CONSTRUCTION</b>	<b>C</b>
<b>WASTEWATER AND STORMWATER NETWORK DESIGN</b>	<b>D</b>
<b>WATER SUPPLY DESIGN AND CONSTRUCTION</b>	<b>E</b>
<b>OPEN SPACES</b>	<b>F</b>
<b>APPENDICES</b>	
Earthworks Design and Construction	B
Road Design and Construction	C
Wastewater and Stormwater Network Design	D
Water Supply Design and Construction	E

## RECORD OF AMENDMENTS

This copy of the Code has been updated as follows:

Amendment number	Date	Clauses amended	Signature
1			
2			
3			
4			
5			
6			

This Code is available electronically from the Council's web site: [www.Wellington.govt.nz](http://www.Wellington.govt.nz)

NOTE: The Council will occasionally update the Code of Practice for Land Development it is the responsibility of the user to ensure they are referencing the latest version.

## RELATED DOCUMENTS

The following documents are either referred to or have been used to produce this code.

### NEW ZEALAND STANDARDS:

- AS1111:200 – ISO metric hexagon bolts and screws
- AS 1112:2000 - ISO metric hexagon nuts
- AS 1397:2001 - Steel sheet and strip - Hot-dipped zinc-coated or aluminium / zinc-coated
- AS 1418:1996 - Cranes (including hoists and winches)
- AS 1627:1997 - Metal finishing - Preparation and pre-treatment of surfaces
- AS 4089:1993 - Priming paint for steel, single component, general purpose
- AS 3735:2001 - Concrete structures for retaining liquids
- AS 3828:1998 - Guidelines for erection of building steelwork
- AS NZS 1158: 1997 - Road lighting - Lighting for roads and public spaces
- AS NZS 1664:1997 - Aluminium structures - Limit state design
- AS NZS 1665:2004 - Welding of aluminium structures
- AS NZS 1734:1997 - Aluminium and aluminium alloys - Flat sheets, coiled sheet and plate
- AS NZS 2312:2002 - Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings
- AS NZS 3725:1989 - Loads on buried concrete pipes.
- AS NZS 3750 - Paints for steel structures
- AS NZS 4455:1997 - Masonry units and segmental pavers
- AS/NZS 4600:2005 - Cold-formed steel structures
- AS NZS 4680:2006 - Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
- AS.NZS 1554:2006 - Structural Steel Welding Set

- NZS 1170:2002 - Structural Design
- NZS 1254:2002 - PVC pipes and fittings for stormwater and surface water applications
- NZS 2280:2004 - Ductile iron pipes and fittings
- NZS 3101:1995 - Concrete structures standard - The design of concrete structures
- NZS 3103:1991 - Specification for sands for mortars and plasters
- NZS 3104:2003 - Specification for Concrete Production
- NZS 3105:2007 - Approval and test specification - Electrical portable outlet devices
- NZS 3107:1978 - Specification for precast concrete drainage and pressure pipes
- NZS 3109:1997 - Concrete construction
- NZS 3111:1986 - Methods of test for water and aggregate for concrete
- NZS 3112:1986 - Methods of test for concrete - Tests relating to fresh concrete
- NZS 3114:1987 - Specification for concrete surface finishes
- NZS 3121:1986 - Specification for water and aggregate for concrete
- NZS 3122:1995 - Specification for Portland and blended cements (General and special purpose)
- NZS 3404 1 & 2:1997 - Steel Structures Standard
- NZS 3501:1976 - Specification for copper tubes for water, gas, and sanitation
- NZS 3604:1999 - Timber Framed Buildings
- NZS 3607:1989 - Specification for round and part-round timber fence posts
- NZS 4158:2003 - Thermal-bonded polymeric coatings on valves and fittings for water industry purposes
- NZS 4203:1992 - General structural design and design loadings for buildings
- NZS 4210:2001 - Masonry construction: Materials and workmanship

- NZS 4229:1999 - Concrete masonry buildings not requiring specific engineering design
- NZS 4230:2004 - Design of reinforced concrete masonry structures
- NZS 4402:1988 - Methods of testing soils for civil engineering purposes
- NZS 4404:2010 - Land development and subdivision engineering
- NZS 4431:1989 - Code of practice for earth fill for residential development
- NZS 4442:1988 - Welded steel pipes and fittings for water, sewage and medium pressure gas
- NZS 4501:1972 - Code of practice for the location marking of fire hydrants
- NZS 4671:2001 - Steel reinforcing materials
- NZS 4672:2007 - Steel pre-stressing materials
- NZS 4702:1982 - Metal-arc welding of grade 275 reinforcing bar
- NZS 4711:1984 - Qualification tests for metal-arc welders
- NZS 6701:1983 - Code of practice for road lighting
- NZS 6801:1999 - Acoustics - Measurement of sound
- NZS 6802:1991 - Assessment of environmental sound
- NZS 6803:1999 - Acoustics - Construction noise
- NZS 6803P:1984 - The measurement and assessment of noise from construction, maintenance and demolition work
- NZS 750:1984 - Specification for underground fire hydrants and surface box frames and covers
- NZS 7601:1978 - Specification for polyethylene pipe (Type 3) for cold water services
- NZS 8630:2004 - Tracks and outdoor visitor structures
- SNZ HB 44:2001 - Subdivision for people and the environment

- SNZ PAS 4509:2003 - New Zealand Fire Service Fire Fighting Water Supplies Code of Practice
- ISO 14713:1999 - Protection against corrosion of iron and steel in structures

**BRITISH STANDARDS:**

- BS 10:1962 - Specification for flanges and bolting for pipes, valves, and fittings
- BS 1010-2:1973 - Specification for draw-off taps and stop valves for water services (screw-down pattern). Draw-off tap and above-ground stop valves
- BS EN 1011.1:1998 & .2:2001 - Welding. Recommendations for welding of metallic materials.
- BS 1560-3.2:1989 - Circular flanges for pipes, valves and fittings (Class designated). Steel, cast iron and copper alloy flanges. Specification for cast iron flanges
- BS 5154:1991 - Specification for copper alloy globe, globe stop and check, check and gate valves
- BS 5896:1980 - Specification for high tensile steel wire and strand for the pre-stressing of concrete
- BS 6572:1985 - Specification for blue polyethylene pipes up to nominal size 63 for below ground use for potable water
- NZS/BS 5163:1986 - Specification for predominantly key-operated cast iron gate valves for waterworks purposes

**TRANSIT NEW ZEALAND SPECIFICATIONS:**

- NRB/MANZ Code of Practice Design for Urban Streets
- NRB/NZ Counties Association: 1985 Guide to Geometric Standards for Rural Roads.
- TNZ Standard Specification F2:2000 - Subsoil drain construction.

- TNZ Standard Specification M1:2006 - Asphaltic Bitumen's
- TNZ Standard Specification M4:2006 - Basecourse Aggregate.
- TNZ Standard Specification M6:2004 - Sealing Chips.
- TNZ Standard Specification M10:2005 - Specification for Asphaltic Concrete
- TNZ Standard Specification P3:1995 - First Coat Sealing
- TNZ Standard Specification P4:1995 - Resealing.
- TNZ Standard Specification P9:1975 - Construction of Asphaltic Concrete Paving
- TNZ Standard Specification T1:1977 - Benkelman Beam Deflection Measurements
- Pavement Design- A guide to the structured Design of Road Pavements (Austroads 2004)
- NZ Supplement to the 2004 Austroads Pavement Design Guide Oct 2005
- Manual of Traffic Signs and Markings; Part 1 Traffic Signs; Transit New Zealand/ Ministry of Transport, 1992
- Manual of Traffic Signs and Markings; Part 2 Markings; Transit New Zealand/Land Transport Safety Authority, 1994
- TNZ Road Safety Audit Procedures for Projects Manual No. TFM9
- Austroads Guide to Traffic Engineering Practice AG- P11
- Austroads Pavement Design Manual – A guide to the Structural Design of road pavements AP-G17
- Clay Brick and Paver Institute Design Manual 1989

**STATUTES:**

- The Local Government Act 1974 and 2002
- The Resource Management Act 1991
- The Public Works Act 1981

- The Soil Conservation and Rivers Control Act 1941
- The Construction Contracts Act 2002
- The Plumbers Gasfitters and Drainlayer's Act 1976
- The Telecommunications Act 2001
- The Electricity Act 1992
- The Gas Act 1992
- The Building Act 2004
- The Health and Safety in Employment Act 1992
- The Environment Act 1986
- The Conservation Act 1987
- Climate Change Response Act 2002
- Energy Efficiency and Conservation Act 2000
- The Fencing Act 1978
- Land Drainage Act 1908
- Traffic Control Devices Rules 2004

**OTHER DOCUMENTS:**

- Wellington City Operative District Plan 27 July 2000
- Wellington Consolidated Bylaw
- Wellington City Council's Code of Practice for Working on the Road August 2006.
- Wellington City Council's draft Biodiversity Action Plan 2007
- Guide to Geometric Standards for Rural Roads, 1985, prepared by New Zealand Counties Association for the National Roads Board New Zealand.

- CBPI Design Manual 1, Clay segmental Pavements – A Design and Construction Guide for Sites Subjected to Vehicular and Pedestrian Traffic
- GWRC Publication Controlling problem weeds in riparian zones: Restore our riparian zones
- GWRC publication Fish-friendly culverts and rock ramps in small streams
- GWRC - Managing your bush block; a guide to looking after indigenous forest remnants in the Wellington region.
- Mark Davis & Colin Meurk Protecting and Restoring our natural heritage – a practical guide.
- Wellington City Council's Tree Preservation Guidelines
- Auckland Regional Councils document TP131 Fish Passage Guidelines for the Auckland Region 2000.
- Department of Conservation 2000 Protecting and Restoring our natural heritage – a practical guide.
- Wellington City Council's Playgrounds Policy (December 2002)
- GWRC's document "Managing your bush block; a guide to looking after indigenous forest remnants in the Wellington region"

## DEFINITIONS

Unless the context indicates otherwise:

<b>“ALTERNATIVE SOLUTIONS”</b>	shall mean options that achieve the bottom line standards Council require. Council will consider alternative solutions that meet these bottom line standards and are fit for purpose. Previously these standards have been met with traditional techniques.
<b>“APPROVED”</b>	shall mean approved by the respective Council Representative.
<b>“CHARTERED PROFESSIONAL ENGINEER”</b>	shall mean a qualified Engineer registered as a current and competent practitioner within a specific field of engineering discipline under the Chartered Professional Engineers Act of New Zealand 2002.
<b>"CONTRACTOR"</b>	shall mean the party undertaking work for Council or the party whose quotation/tender has been accepted by the Council.
<b>“COUNCIL”</b>	shall mean the Wellington City Council.
<b>“COUNCIL REPRESENTATIVE”</b>	shall mean the delegated Council officer for that aspect of the development.
<b>“DISTRICT PLAN”</b>	shall mean the District Plan as defined by the Resource Management Act, 1991.
<b>“EPHEMERAL STREAM”</b>	a stream that is not permanently flowing, or flows only during and after rain events.
<b>“RURAL” LAND</b>	shall be defined by the District Plan.

- “SUBDIVIDER”** shall mean either the person/s who are the registered proprietors of the land to be subdivided in terms of the Resource Management Act or in the case of development without subdivision shall mean the person/s who are the registered proprietors of the land in respect of which construction works are to be or a being undertaken.
- “SUBDIVISION”** shall mean the Subdivision of land as defined in the Resource Management Act, Section 218.
- “URBAN” LAND** shall be any land not defined as Rural.