

PART 1: INTRODUCTION

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1.1 REFERENCED DOCUMENTS:

Planning and Policy:

- [Timaru District Plan](#)
- Resource Management Act (1991)
- Building Act (2004)
- Local Government Act (2002) and Local Government Act 2002 Amendment Act 2014
- New Zealand Building Code (Schedule 1, Building Regulations 1992)
- Timaru District Council [Long Term Council Plan \(2021-2031\)](#)
- Environment Canterbury [Land and Water Regional Plan \(2019\)](#)
- Waka Kotahi NZTA [Landscape Guidelines \(2014\)](#)
- All New Zealand Transport Agency (NZTA) guidelines (including RTS series) and manuals (including TNZ standards and the *Bridge Manual*)
- NZS 3910 *Conditions of contract for building and civil engineering construction*
- NZS 4404:2010 *Land development and subdivision infrastructure*
- NZS 4431:1989 *Code of practice for earth fill for residential development*
- AS/NZS 1158 *Set Lighting for roads and public spaces set*

Design:

- Austroads Guide Suite
- Christchurch City Council Design Guide [Crime Prevention Through Environmental Design](#)

Construction:

- Timaru District Council [Construction Standard Drawings and Specifications](#)

Note: Where a conflict exists between any Standard and the specific requirements outlined in the Infrastructure Design Standard (IDS), the IDS takes precedence (unless deemed otherwise at the discretion of the Timaru District Council).

1.2 INTRODUCTION

This document is based on the Christchurch City Council (CCC) Infrastructure Design Standard (IDS). Timaru District Council (TDC) is grateful to the Christchurch City Council for approval to use the IDS and benefit from both the knowledge and learnings it represents.

The Timaru District Council Infrastructure Design Standard (TDC IDS) will be revised on a regular basis much as CCC does.

In 2019, TDC decided to develop a separate Code of Practice based on the IDS for use within the wider Timaru district. The TDC IDS will act as a blueprint for Council and Developers to undertake Land Development and Infrastructure projects across the district. The TDC IDS in combination with TDC Infrastructure Construction Specifications and Standard Drawings form the TDC Engineering Code of Practice.

1.3 DOCUMENT PURPOSE

The purpose of the Infrastructure Design Standard is to provide the design standard for both TDC funded assets and assets that will be vested with Council, through processes such as subdivision, as well as provide a publicly available guide for developments to reference for private asset design.

Previously, requirements were detailed within the District Plan or through references to other standards. This first edition aims to bring these details together into one consolidated document.

There may be examples within the Wider Timaru District where infrastructure does not comply with the requirements of the IDS. It is not the intention that compliance with the IDS be used as a vehicle to justify retrofitting or inclusion in or reprioritisation of the Council's programme of work as determined by the *Long Term Plan*.

Note: Where the *District Plan* is referred to, this means those objectives and provisions in the operative Timaru District Plan, unless specifically stated otherwise.

The parts of the TDC IDS are summarised below:

- **Part 1: Introduction** highlights the major changes and includes those definitions specific to the IDS.
- **Part 2: General Requirements** covers a number of regulatory details and sets out the process from design to acceptance of land developments by the Council
- **Part 3: Quality Assurance** sets out the requirements for the application of quality assurance practice's to the construction of all assets. Each project will require the implementation of a project quality system, with documentation and certification presented to the Council at both the design and

construction stages; the traditional Council role of Clerk of Work type inspections will be replaced with a structured audit-based system.

- **Part 4: Geotechnical Requirements** sets out the requirement for geotechnical input in land development and what must be considered by the geotechnical engineer. It emphasises the Council's desire to work with the landforms and preserve natural features. It also details issues to be considered on Hazardous Activity and Industries List (HAIL) sites and erosion, sediment and dust control.
- **Part 5: Stormwater and Land Drainage** provides more prescriptive design and compliance criteria and reinforces the change of emphasis to include water quality and ecological protection. Fish passage design guidance is referenced.
- **Part 6: Wastewater Drainage** incorporates both an explanation of Timaru's reticulation system and how the Council's philosophy has changed. It provides the design and compliance criteria for wastewater systems including those pertaining to modern materials. The requirements for private drains have been tied to the New Zealand Building Code.
- **Part 7: Water Supply** covers the design and compliance criteria of water reticulation. It references the Drainage and Water Construction Specifications for larger infrastructure including those pertaining to modern materials.
- **Part 8: Roading** sets out both the design and compliance criteria for the road layouts e.g. road classification and the roads themselves e.g. footpaths construction depths. It includes specifications for the design and construction of roads, former National Roads Board requirements have been replaced with Austroads specifications.
- **Part 9: Utilities** covers the Council's compliance requirements for telecommunication, electricity and gas. It excludes the utility design itself, as these are beholden to the network operator's requirements.
- **Part 10: Lighting** sets the Council's requirements for street lighting design and construction. It builds on *AS/NZS 1158*. It includes LED requirements.
- **Part 11: As-Builts** set the Council's requirements for as-built information on completion of development construction works.

1.4 DEFINITIONS

This is the non-exhaustive list of definitions relevant to the Timaru District Council IDS. These definitions complement those included in the Ministry for the Environment National Policy Statement 21 Definitions Standard.

Definitions are provided where another source is cited.

Definitions specific to this document include:

Drain¹

Drain means any artificial watercourse, open or piped, that is designed, and constructed, or used, for the purpose of the drainage of surface or subsurface water, but excludes artificial watercourse used for the conveyance of water for electricity generation, irrigation, or water supply purposes,

Drainage

DRAINAGE means wastewater drainage or stormwater drainage, and “drain” has a corresponding meaning.

Earthworks²

Any alteration to the contours, including the excavation and backfilling or recompaction of existing natural ground and the stripping of vegetation and topsoil

Network Utility Operator³

s. 166 of the Resource Management Act 1991

Network utility operator means a person who—

(a) undertakes or proposes to undertake the distribution or transmission by pipeline of natural or manufactured gas, petroleum, biofuel, or geothermal energy; or

(b) operates or proposes to operate a network for the purpose of—

(i) telecommunication as defined in section 5 of the Telecommunications Act 2001; or

(ii) radiocommunication as defined in section 2(1) of the Radiocommunications Act 1989; or

(c) is an electricity operator or electricity distributor as defined in section 2 of the Electricity Act 1992 for the purpose of line function services as defined in that section; or

(d) undertakes or proposes to undertake the distribution of water for supply (including irrigation); or

(e) undertakes or proposes to undertake a drainage or sewerage system; or

(f) constructs, operates, or proposes to construct or operate, a road or railway line; or

(g) is an airport authority as defined by the Airport Authorities Act 1966 for the purposes of operating an airport as defined by that Act; or

¹ National Policy Statement 21 Definitions Standard

² NZS 4404: 2010

³ Section 166 of the Resource Management Act 1991

(h) is a provider of any approach control service within the meaning of the Civil Aviation Act 1990; or
(i) undertakes or proposes to undertake a project or work prescribed as a network utility operation for the purposes of this definition by regulations made under this Act, —
and the words network utility operation have a corresponding meaning.
requiring authority means—
(a) a Minister of the Crown; or
(b) a local authority; or
(c) a network utility operator approved as a requiring authority under section 167.

Wastewater⁴

Water that has been used and contains unwanted dissolved or suspended substances from communities, including homes, businesses, and industries

⁴ NZS 4404: 2010

1.5 ABBREVIATIONS

The following is a non-exhaustive list of the abbreviations that apply in the Infrastructure Design Standard. These abbreviations are additional to those abbreviations included within NZS 4404.

AADT – Average annual daily traffic

AEP - annual exceedance probability

ASF (l/s) – average wastewater flow is the daily average flow from domestic, industrial and commercial sources, excluding infiltration and surface entry, as determined in clause 6.4 – Sanitary Sewer Design Flows (Wastewater Drainage)

CAR – Corridor Access Request

CPTED – Christchurch City Council Design Guide *Crime Prevention Through Environmental Design*

CSS – Christchurch City Council *Construction Standard Specifications*

GPS – global positioning system

HAIL – Hazardous Activity and Industries List

IDS – *Infrastructure Design Standards*

ISO – International Standards Organisation

LTCCP – *Long-Term Council Community Plan - Our Community Plan*

MF (l/s) – maximum flow is the instantaneous design total peak

NUO – Network Utility Operator

OD – outside diameter

P/A ratio – peak to average ratio PSF/ASF

PE 80B – Polyethylene type 80B

PE 100 – Polyethylene type 100

PN – Pressure nominal

PSF (l/s) – peak wastewater flow

PVC-o – Oriented Poly-Vinyl Chloride

PVC-u – Unplasticised Poly-Vinyl Chloride

PWAP – Parks and Waterways Access Policy

RAMM – Road Asset and Maintenance Management

RMA – Resource Management Act

RON – road opening notification

SCADA – Supervisory, Control And Data Acquisition

SCIRT – Stronger Christchurch Infrastructure Rebuild Team

SN – Stiffness number

SPF – Storm peak factor

STMS – Site Traffic Management Supervisor

WAP – Works Access Permit

WK – Waka Kotahi NZ Transport Agency