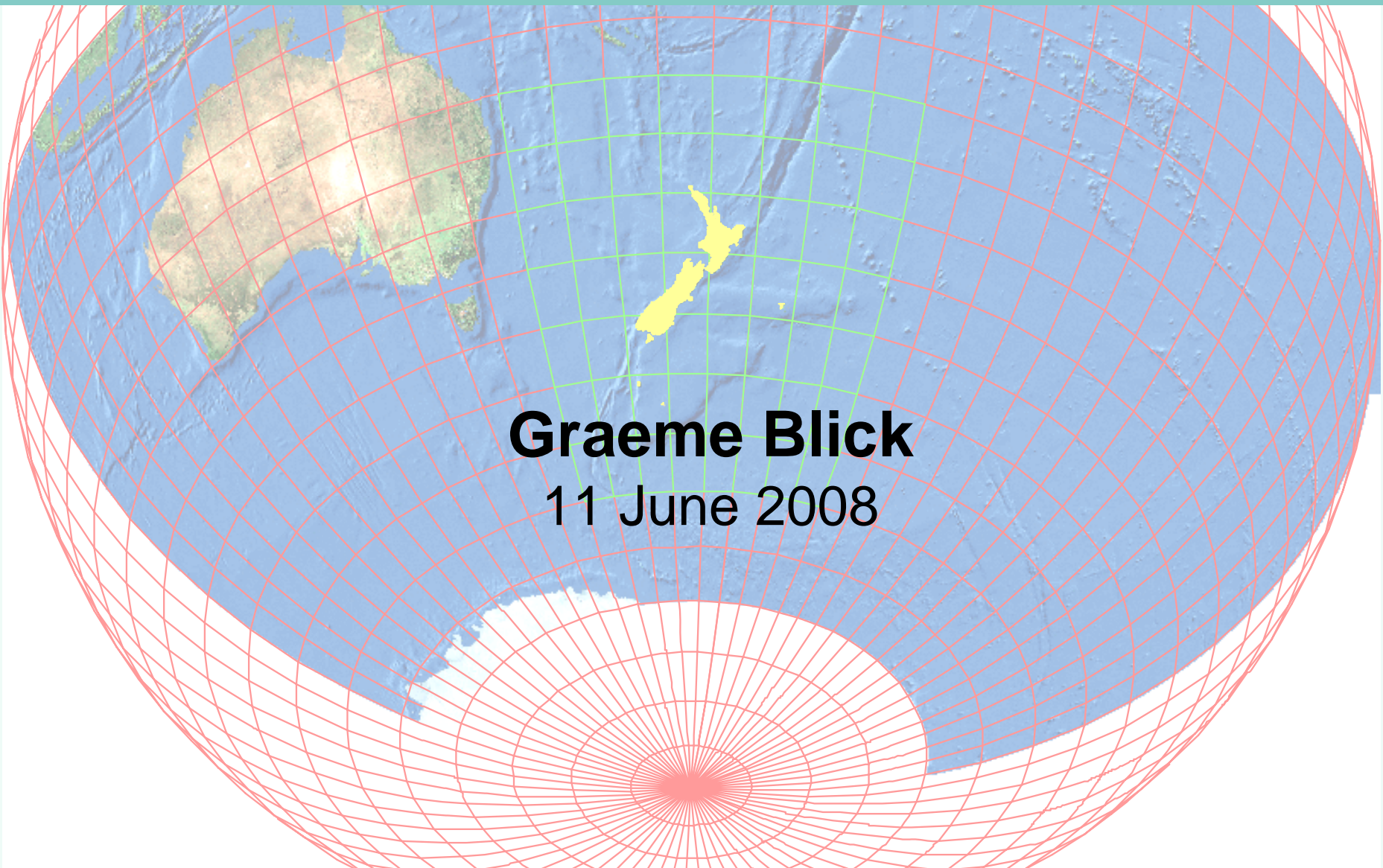


# Update on new **Topo50** series



**Graeme Blick**  
11 June 2008

# National 1:50k topographic mapping in New Zealand

## NZMS1 (1:63 360) series

- 1939 – 1st sheet (Napier Hastings)
- 1975 – final sheet completed (36 yrs)



## NZMS 260 (1:50 000) series

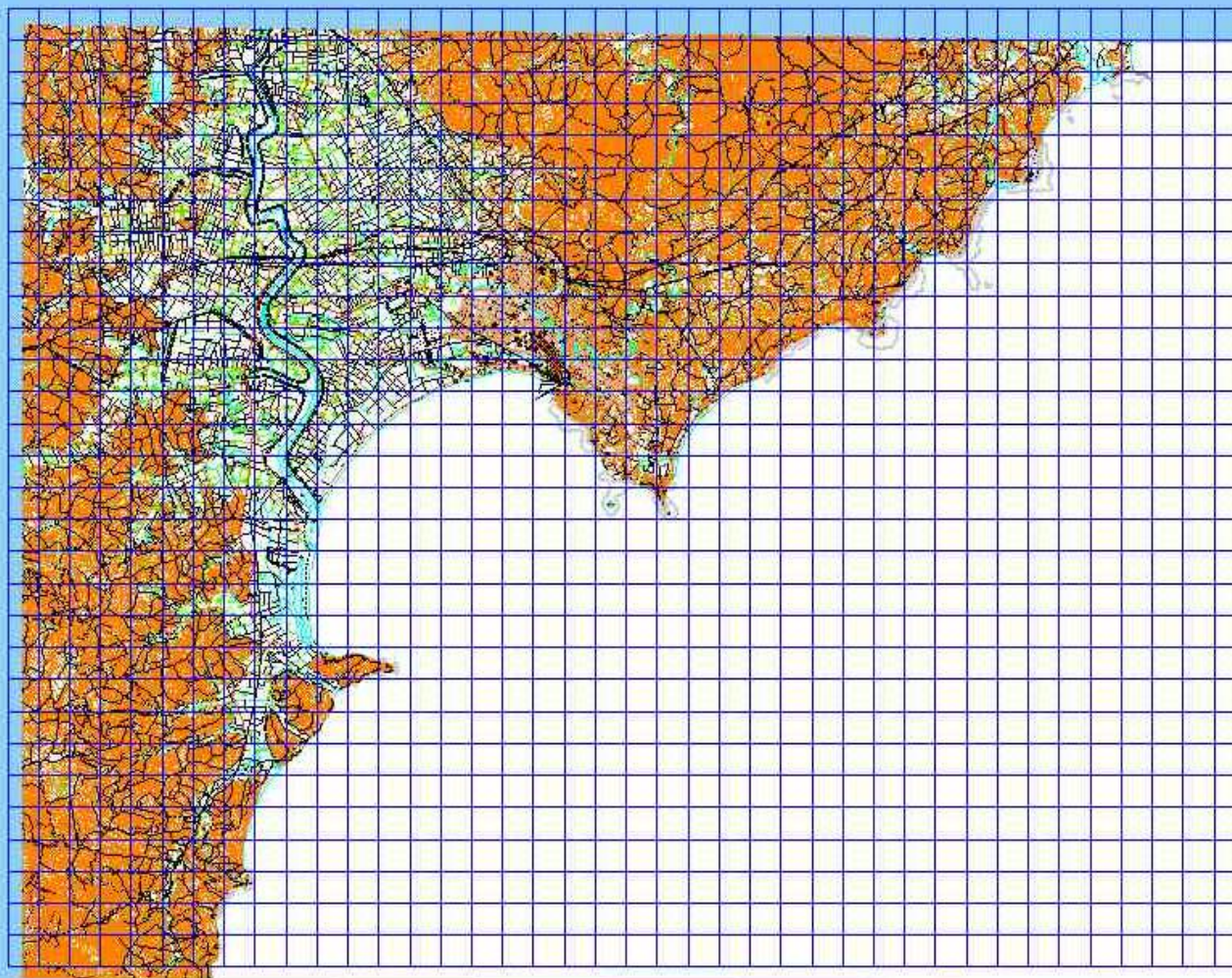
- 1977 – 1st sheet published  
- necessitated re-mapping each sheet
- 1996 – final sheet completed (20 years)





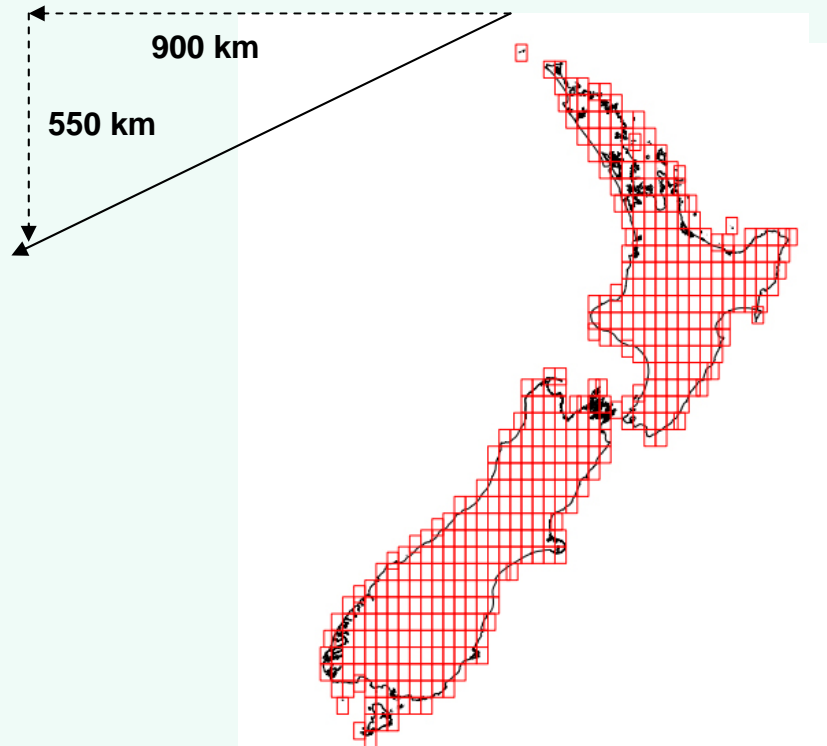
# NZTM2000 grid overlain the NZMG grid

## Y18 (Gisborne)



The shift and twist reflects the shift in the datum (200m) and the different projection used

# Changing the grid coordinate false origin



## NZMG (NZMS 260 maps)

### True origin

Latitude 41° 00' 00" South

Longitude 173° 00' 00" East

### False origin

Northing 6,023,150 mN

Easting 2,510,000 mE

## NZTM2000 (Topo50 maps)

### True origin

Latitude 0° 00' 00" South

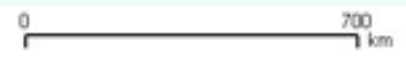
Longitude 173° 00' 00" East

### False origin

Northing 10,000,000 mN

Easting 1,600,000 m East

*Sufficiently different from NZMG  
coordinates so as to NOT cause  
confusion*

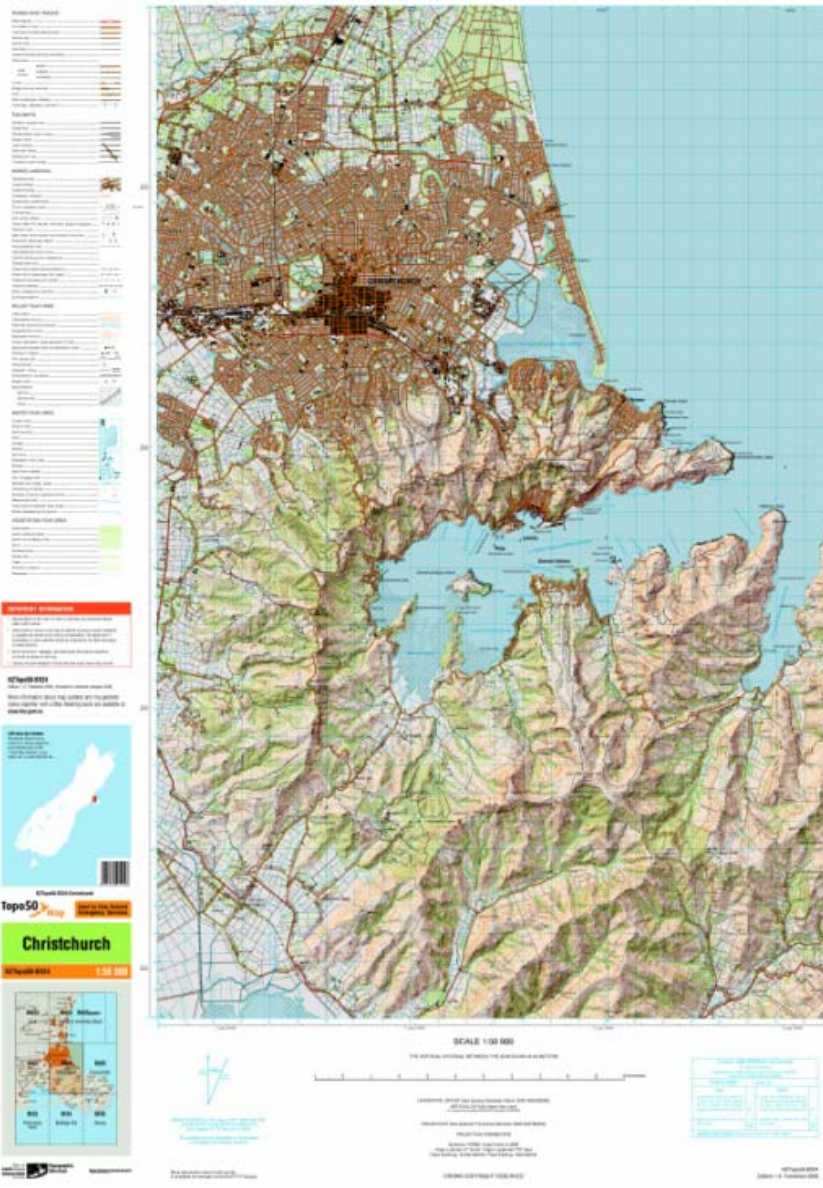


# 2006 - New National Map Series -Topo50



- Produced by LINZ
- 1:50,000 scale national map series
- Uses NZGD2000 and NZTM2000
- Launched nationally in Sept 09
- Base map data for emergency services

# Design & layout improvements



## Format Improvements

- New map layout and sheet no,s
- 452 map sheets (app 300 in NZMS 260) series

## Front Cover

- Easily distinguished from the 260 series
- Adjacent sheet names shown
- States – ‘used by NZ emergency services’

## Back Cover

- Displays a locality indicator
- Refers to the LINZ website

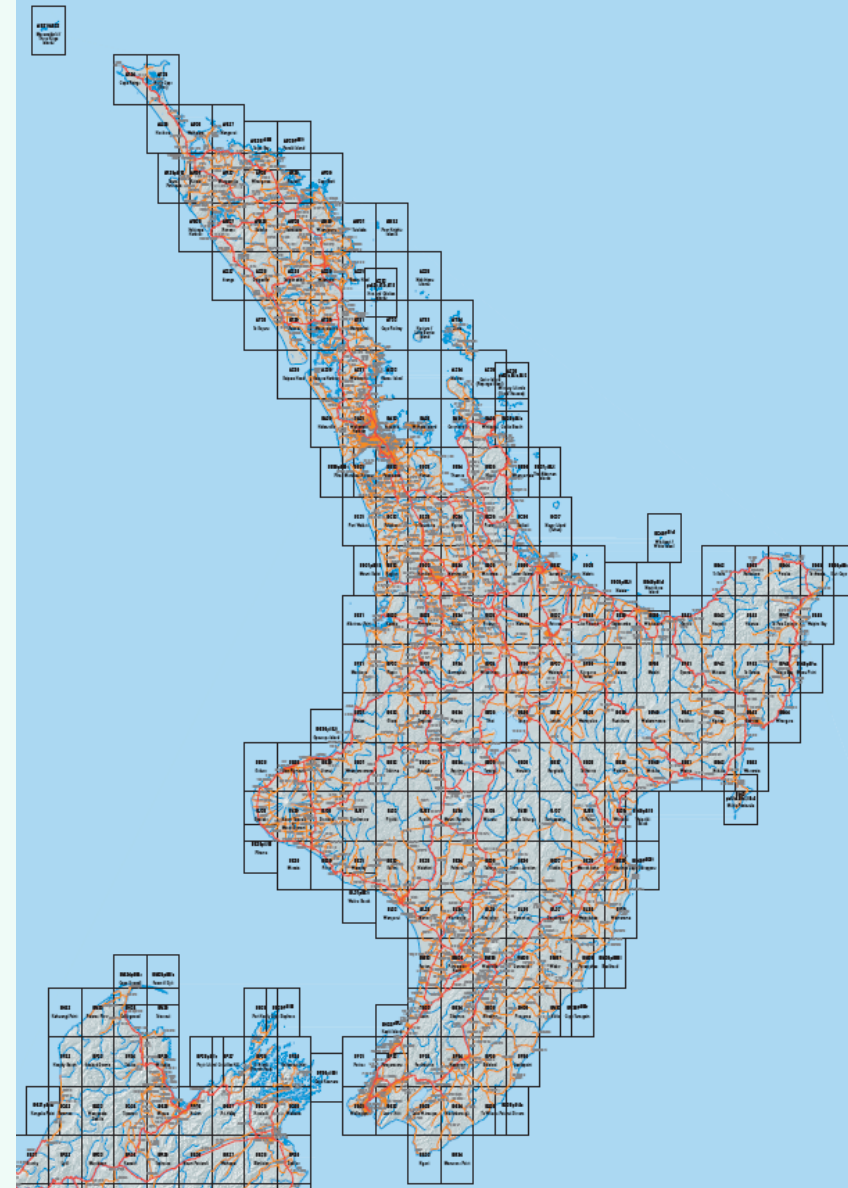
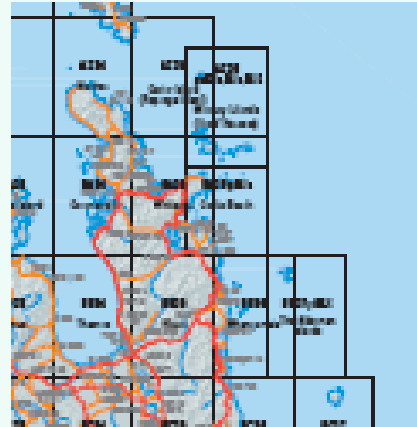
## Legend

- Indicate warnings or important information.

## Map Reading References

- Projection parameters provide more information

# Topo50 sheet layout

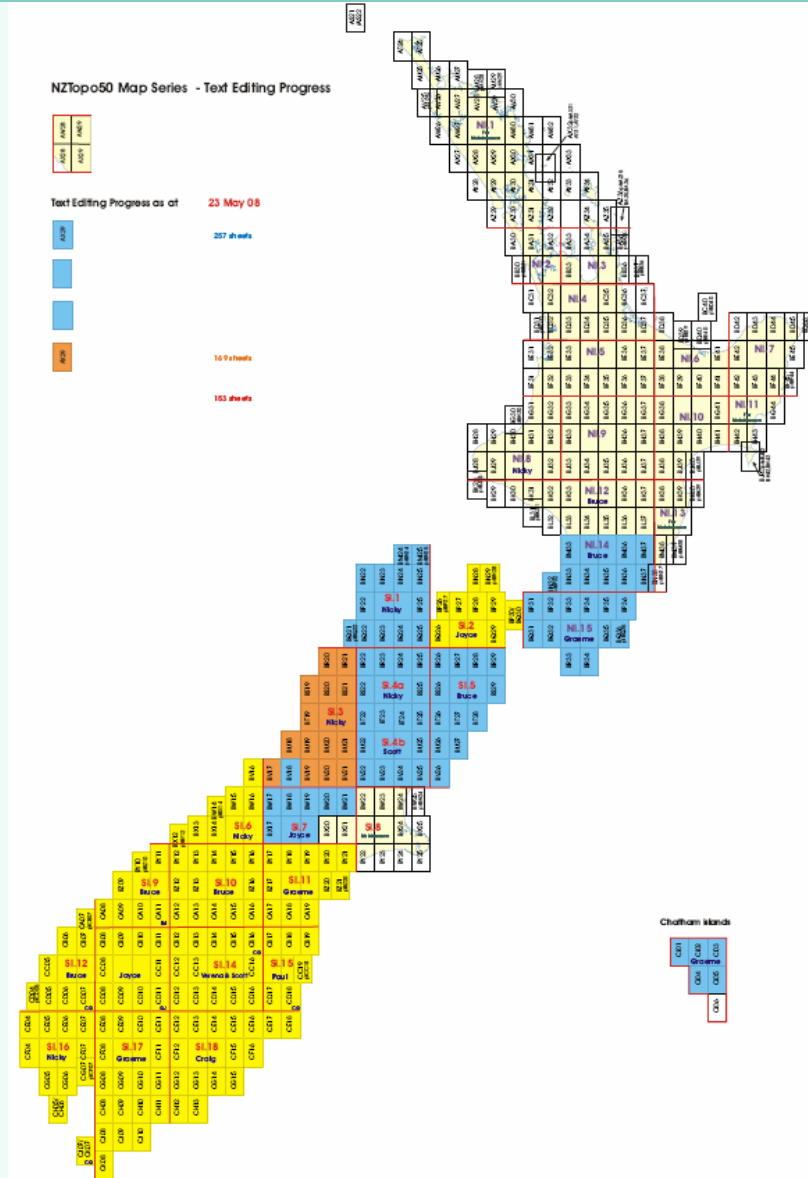


## Format Improvements

- A1 portrait format
- No part sheets
- Where there is little information on one sheet up one third of the adjoining sheet(s) may be included

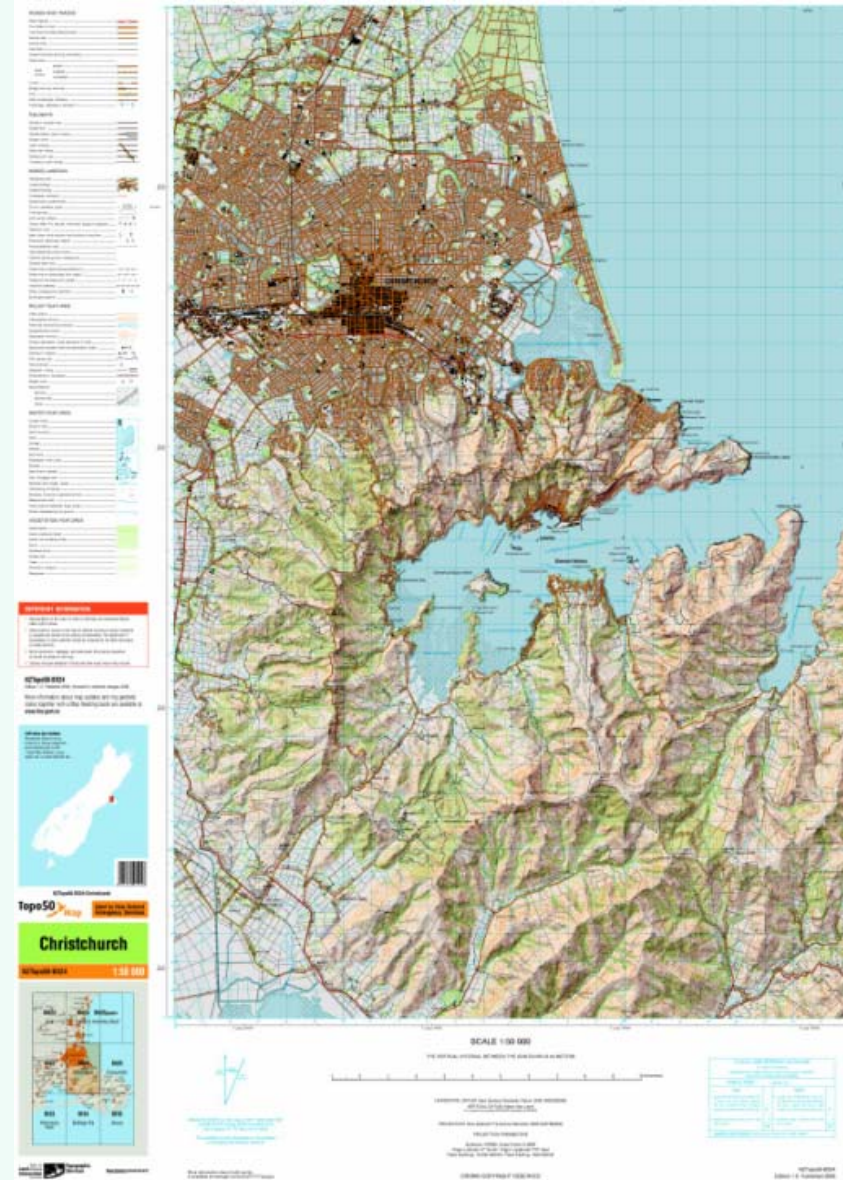
# Production Update

South Island text placement  
largely complete



# Introduction of Topo50 map series

- Entire national 1:50,000 map series (452 maps) will be launched in September 2009
- There will be no NZMS 260 new editions prior to launch
- Emergency services will switch their 111 systems to NZTM2000 and use Topo50 maps from September 2009



## Overall Objective

- To encourage a quick uptake of the Topo50 maps by map-users to enable consistency with the maps used by emergency services

## Outcomes (from Comms Plan)

- Achieve high customer uptake of Topo50 maps within first year
- Large numbers of emergency services NZMS260 stocks are taken out of circulation & replenished with Topo50 maps prior to launch

**Keep on Track - Take a map**

**Topo50**  **Map**

**Used by New Zealand  
Emergency Services**

# Communications Stages

Consultation	Awareness	Preparation Pre-launch	Implementation Launch	Monitoring & Maintenance (BAU)
2007	2008	Jan – August 2009	September 2009- December 2009	2010

- **Quarterly updates**

- July update -More info on the differences between NZMG to NZTM2000, 260 to Topo50 maps, add less technical FAQs (for public)

- **Subscribers**

- Ask customers to email [newmapseries@linz.govt.nz](mailto:newmapseries@linz.govt.nz) with “Subscribe to Topo50 in subject line”

# Resource material

- Topography...**
- Topographic Maps
  - Aerial & Orthophotos
  - Topographic Data
  - Advisory Groups
  - Projects & Programmes
  - Topo50 Map Series Project
  - Emergency Services ES

**Topo50 Map Reading Guide**

...the new LINZ Topographic Map Series

...provides basic information about a Topo50 map and how to read one

This page explains how to use some of the features of a Topo50 map that will help you to use it.

Topo50 maps show geographic features in detail. They are useful for a wide range of activities such as local navigation, for advice on, for example, bush or local areas of the environment.

Topo50 maps use the international best of New Zealand Geographic Datum 2000 (NZGD2000) and New Zealand Transverse Mercator (NZTM2000) projection, and are compatible with modern navigational systems such as GPS.

You can read more about them, and why the change was made at [www.linz.govt.nz](http://www.linz.govt.nz)

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Search

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PRINT VERSION

## New National Map Series

**EMERGENCY SERVICES SHIFTING TO NZTM2000 MAPS**

Emergency services and defence agencies are switching to NZTM2000 maps. The new series will provide the same detailed and accurate representation at 1:50,000 scale as LINZ's current NZMS260 series.

**WHILE THE GEOGRAPHIC FEATURES PORTRAYED ON THE TOPO50 MAP SERIES USE THE SAME AS THOSE ON THE NZMS260 SERIES, THE COORDINATES OF THESE FEATURES WILL CHANGE. EACH INDIVIDUAL NEW TOPO50 MAP WILL COVER A DIFFERENT AREA TO THE NZMS260 MAP DUE TO THE CHANGE TO AN A1 PORTAL FORMAT.**

Some areas will have been updated as part of LINZ's regular maintenance cycle. Prior to launch in September 2009, LINZ will publish a map on our website, [www.linz.govt.nz](http://www.linz.govt.nz), showing the currency of the data on all maps.

In the development of the Topo50 maps, LINZ has introduced technology that will reduce the time required for future Topo50 map editions.

The NZMS260 series will only be available as reprints until map editions.

**NEW MAPS, NEW TECHNOLOGY**

Since the mid-1970s, LINZ's 1:50,000 scale maps have been produced on the New Zealand Map Grid projection, a 'best fit' for New Zealand.

The new Topo50 maps are an international 'best fit', making them more compatible with modern navigational products such as GPS.

They will use the New Zealand Geoid Datum 2000 (NZGD2000) and New Zealand Transverse Mercator (NZTM2000) projection.



## Technical information

The Topo50 maps use the New Zealand Geoid Datum 2000 (NZGD2000) and New Zealand Transverse Mercator 2000 projection (NZTM2000).

**NEW ZEALAND GEODETIC DATUM 2000**

See LINZ Standard NZMS2600

Reference system	Geoid Reference System
Datum	1982 (G2000)
Sea-level axis	9216107.000
Flattening	1/298257222.101

**NEW ZEALAND TRANSVERSE MERCATOR PROJECTION 2000**

See LINZ Standard NZMS2600

Projection type	Transverse Mercator
Reference ellipsoid	GRS80
Datum	1982 (G2000)
Origin latitude	47° 02' 00" South
Origin longitude	172° 02' 00" East
Falses easting	1 000 000 metres North
Falses northing	1 000 000 metres East
Central Meridian scale factor	0.9999

**COORDINATE CONVERSIONS AND TRANSFORMATIONS**

Information on coordinate conversions and transformations is available on the LINZ website <http://www.linz.govt.nz/infocentre/coordinate-conversions>

Refer to the information under the heading 'Online Conversion' on the 'Coordinate Conversions and Transformations' page. This includes:

- Coordinate conversion tools - basic and advanced levels
- Conversion software available for download
- Conversion software for NZMS2600 conversion using GCS2000
- Conversion software for NZMS2600 conversion using NZGD2000
- Conversion software for NZMS2600 conversion using NZTM2000
- Conversion software for NZMS2600 conversion using NZMS2600

**MORE ON TOPO50 MAPS AT [WWW.LINZ.GOVT.NZ](http://WWW.LINZ.GOVT.NZ)**

For more information, check out the Topo50 map series page under 'Projects & Programmes' in the 'Topography' section.

You can also register for regular email updates on launch [www.linz.govt.nz](http://www.linz.govt.nz).

You can also register for regular email updates on launch progress by sending [stammar@linz.govt.nz](mailto:stammar@linz.govt.nz).

# WHERE IN THE WORLD ARE WE?

Version 2

A technical guide to datums and projections in New Zealand

[www.linz.govt.nz](http://www.linz.govt.nz)

Land Information New Zealand

Toitu te whenua