

Canterbury Earthquake Geodetic Marks (2010, 2011) - Comprehensive

Metadata

File Identifier

| 00fe88cf-412f-4ead-1e5b-ee16f278c501

Language

| eng

Character Set

Character Set Code

| utf8

Hierarchy Level

Scope Code

| dataset

Hierarchy Level Name

| dataset

Contact

Responsible Party

Individual Name

| omit

Organisation Name

| LINZ - Land Information New Zealand

Position Name

| Chief Geodesist - National Geodetic Office

Contact Info

Contact

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Telephone

Voice

| 04 4600110

Address

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Delivery Point

| 155 The Terrace

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Postal Code

6011

Country

New Zealand

Electronic Mail Address

info@linz.govt.nz

Role

Role Code

resourceProvider

Date Stamp

Date

2013-05-01

Metadata Standard Name

ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005,
Geographic information - Metadata

Metadata Standard Version

1.1

Reference System Info

Reference System

Reference System Identifier

Identifier

Code

2193

Identification Info

Data Identification

Citation

Citation

Title

Canterbury Earthquake Geodetic Marks (2010, 2011) - Comprehensive

Date

Date

Abstract

The Canterbury region of New Zealand experienced a sequence of significant earthquakes during 2010 and 2011. These earthquakes occurred on 2010-09-04, 2011-02-22, 2011-06-13 and 2011-12-23. This layer contains coordinates computed from GNSS fast static and network RTK surveys undertaken after the Canterbury earthquakes. It also includes Lyttelton Vertical Datum 1937 and Christchurch Drainage Datum heights, derived from the GNSS data. **Users may also be interested in the simplified data in the companion layer [Canterbury Earthquake Geodetic Marks (2010, 2011) - Simple](<http://data.linz.govt.nz/layer/1589>).** These

coordinates are only provisional. Analysis is ongoing as further data is collected. Coordinates were calculated using SNAP v2.3.61. Stations were constrained using coordinates calculated by GNS Science. Some coordinates were calculated from data provided by Christchurch City Council and other public and private organisations. No precise levelling data has been used. The uncertainty (one standard deviation) is 0.02m horizontally, and 0.03m vertically for NZGD2000 ellipsoidal heights. The uncertainty (one standard deviation) of the Lyttelton Vertical Datum 1937 and Christchurch Drainage Datum heights is 0.05m. The coordinates calculated prior to 2010-09-04 have been calculated from a combined adjustment including LINZ data and additional data provided by public and private organisations. These coordinates differ from those in the Geodetic Database and more accurately reflect the position of the mark immediately prior to the 2010-09-04 earthquake. The deformation model `igns2011_working.grd` calculated from a model (v4) provided by GNS Science on 28 April 2011 was used to remove secular deformation. Lyttelton Vertical Datum 1937 heights have been computed from NZGD2000 ellipsoidal heights by subtracting NZGeoid2009 geoid heights and adding an offset of 0.47m to bring in terms of Lyttelton Vertical Datum 1937. Christchurch Drainage Datum (CDD) heights have been computed in the Christchurch area from NZGD2000 ellipsoidal heights by subtracting NZGeoid2009 geoid heights and adding an offset of 0.523m (specifically calculated for Christchurch City) to bring in terms of Lyttelton Vertical Datum 1937 (for Christchurch) and a further offset of 9.04m to bring in terms of CDD. The model used to estimate whether movements greater than 2cm occurred at a mark (excluding those due to liquefaction or other localised deformation) after the 2010-09-04 earthquake was provided by GNS Science (`Darfield_Sep2010_model_8.5_grid_displacements_calcs.xls`). The model used to estimate whether movements greater than 2cm occurred at a mark (excluding those due to liquefaction or other localised deformation) after the 2011-02-22 earthquake was provided by GNS Science (`Chch_Feb2011_geodetic_source_model_3.21.xls`). The model used to estimate whether movements greater than 2cm occurred at a mark (excluding those due to liquefaction or other localised deformation) after the 2011-06-13 earthquake was provided by GNS Science (`Chch_Jun2011_geodetic_source_model_0.4.xls`). The model used to estimate whether movements greater than 2cm occurred at a mark (excluding those due to liquefaction or other localised deformation) after the 2011-12-23 earthquake was provided by GNS Science (`Chch_Dec2011_geodetic_source_model_0.2.xls`). These coordinates are suitable for use in surveys and other geospatial activities in Canterbury and Christchurch. **For full information about this dataset, see [the Canterbury earthquake information](<http://www.linz.govt.nz/survey-titles/canterbury-earthquake/canterbury-earthquake/geodetic-survey-control-coordinates>) on the LINZ website.**

Purpose

To support the geospatial reference frame in post-earthquake Canterbury, including Christchurch.

Status

Progress Code

onGoing

Point Of Contact

Responsible Party

Individual Name

omit

Organisation Name

LINZ - Land Information New Zealand

Position Name

Chief Geodesist - National Geodetic Office

Contact Info

Contact

Phone

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0800 665 463 or +64 4 460 0110

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Role

Role Code

pointOfContact

Resource Maintenance

Maintenance Information

Maintenance And Update Frequency

Maintenance Frequency Code

asNeeded

Resource Format

Format

Name

*.xml

Version

Unknown

Descriptive Keywords

Keywords

Keyword

New Zealand

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Jurisdictions

Date

Edition

Version 2.1

Edition Date

Date

2008-10-29

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-jurisdic.xml#anzlic-jurisdic>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Descriptive Keywords

Keywords

Keyword

LAND-Geodesy

Keyword

HAZARDS-Earthquake

Keyword

LAND-Cadastre

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Search Words

Date

Edition

Version 2.1

Edition Date

Date

2008-05-16

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-theme.xml#anzlic-theme>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Resource Constraints

Security Constraints

Classification

Classification Code

unclassified

Resource Constraints

Legal Constraints

Use Limitation

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Restriction Code

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Use Constraints

Restriction Code

license

Spatial Representation Type Code

textTable

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

location

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

171.23172.55-44.02-42.46

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.linz.govt.nz/layer/51588-canterbury-earthquake-geodetic-marks-2010-2011-comprehensive/>

Data Quality Info

DQ _ Data Quality

Scope

DQ_Scope

Level

Scope Code

dataset

Level Description

Scope Description

Other

dataset

Lineage

LI_Lineage

Statement

The estimated accuracy is 0.02m horizontally and 0.03m vertically for NZGD2000 ellipsoidal heights. The estimated accuracy of the Lyttelton Vertical Datum 1937 and Christchurch Drainage Datum heights is 0.05m. This data is identical to that contained in the csv file at:

http://www.linz.govt.nz/sites/default/files/survey-titles/cadastral-surveying/canterbury-earthquake/information-surveyors/canterbury_eq_linz_coords_comprehensive_v0.6.csv

Metadata Constraints

Security Constraints

Classification

Classification Code

unclassified

Metadata Constraints

Legal Constraints

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