

Canterbury - Kaikoura LiDAR 1m DEM (2012)

Metadata

File Identifier

aedaafc5-2d34-77ec-c078-93af9602cdc0

Language

eng

Character Set

Character Set Code

utf8

Hierarchy Level

Scope Code

dataset

Hierarchy Level Name

dataset

Contact

Responsible Party

Organisation Name

Toitū Te Whenua Land Information New Zealand

Position Name

Lidar Coordination Manager

Contact Info

Contact

Phone

Telephone

Voice

04 4600110

Address

Address

Delivery Point

155 The Terrace

City

Wellington

Postal Code

6145

Country

New Zealand

Electronic Mail Address

customersupport@linz.govt.nz

Role

Role Code

pointOfContact

Date Stamp

Date

2017-03-14

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 - Kaikoura LiDAR 1m DEM (2012)

Date

Date

Abstract

This layer contains the DEM for LiDAR data from the Kaikoura area captured in 2012. The DSM is available as layer [Canterbury - Kaikoura Lidar 1m DSM (2012)] (<http://data.linz.govt.nz/layer/3545>). The index tiles are available as layer [Canterbury - Kaikoura Lidar Index Tiles (2012)] (<http://data.linz.govt.nz/layer/3570>). The LAS point cloud and vendor project reports are available from [OpenTopography] (<https://portal.opentopography.org/datasets?loc=New%20Zealand>). Lidar was captured for Environment Canterbury Regional Council by Aerial Surveys in 2012. Note that this capture was prior to the significant vertical and horizontal displacements from the 2016 Kaikoura earthquakes. The datasets were generated by Aerial Surveys and their subcontractors. The survey area includes the Kaikoura township area and adjacent coastal strips. Data management and distribution is by Toitū Te Whenua Land Information New Zealand. Data comprises:

- DEM: tif or asc tiles in NZTM2000 projection, tiled into a 1:1,000 tile layout
- DSM: tif or asc tiles in NZTM2000 projection, tiled into a 1:1,000 tile layout
- Point cloud: las tiles in NZTM2000 projection, tiled into a 1:1,000 tile layout

Data was collected at >1 pulse/square metre pulse density. Attributes include: -Elevation -Intensity values -Return number -Adjusted GPS time -Classification Vertical accuracy specification is +/-0.2m (@ 95% confidence) Vertical datum is NZVD2016

Status

Progress Code

completed

Point Of Contact

Responsible Party

Organisation Name

Toitū Te Whenua Land Information New Zealand

Position Name

Lidar Coordination Manager

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Role

Role Code

pointOfContact

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-Topography

Keyword

LAND-Cover

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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Spatial Representation Type Code

grid

Representative Fraction

Denominator

Integer

1000

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

elevation

Topic Category Code

imageryBaseMapsEarthCover

Extent

EX_ Extent

Geographic Element

EX_ Geographic Description

Identifier

Authority

Citation

Title

ANZMet Lite Country codelist

Date

Edition

Version 1.0

Edition Date

Date

2009-03-31

Identifier

Identifier

Code

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

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Code

nzl

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

173.25868698174.071550417-42.9174200946-41.9466333016

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.linz.govt.nz/layer/53542-canterbury-kaikoura-lidar-1m-dem-2012/>

Data Quality Info

DQ _ Data Quality

Scope

DQ _ Scope

Level

Scope Code

dataset

Level Description

Scope Description

Other

dataset

Lineage

LI _ Lineage

Statement

Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft on July 10 and 17 2012, using Aerial Surveys' Optech ALTM 3100EA LiDAR system. Survey Specification: □ Scanner: Optech ALTM 3100EA □ Flying height: 1250m AMGL □ Scan Angle: +/- 14.9 degrees □ Scan Frequency: 47.3Hz □ Pulse Rate 70kHz □ Swath Overlap: 35% □ Points Per Sqm: 1 Data processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSpac software. This work was all undertaken in NZGD2000 coordinate system using the data collected from Aerial Surveys basestation: Benchmark : A79B Base Station Position: 42 15 55.52400 S 173 48 23.40990 E 18.425 Ell Height Antenna Height: 216mm, 218mm, 218mm The POS data was combined with the LiDAR range files and used to generate LIDAR point clouds in NZTM and ellipsoidal heights. This process was undertaken using Optech LMS LiDAR processing software. The data was checked for completeness of coverage. The relative fit of data in the overlap between strips was also checked. The height accuracy of the ground classified LiDAR points was checked using open land-cover survey check site data collected by C & R Surveyors Ltd. This was done by calculating height differences statistics between the checkpoints and a TIN of the LiDAR ground points. A -0.188m vertical offset was applied to the data to bring it into terms with the survey check site data. The standard deviation statistic is 0.041 m and a RMS of 0.089m. C & R Surveyors Ltd field surveyed check sites that were used to verify the accuracy of the processed ground dataset. The positional accuracy of the LiDAR data has been checked by overlaying C & R Surveyors Ltd surveyed data over the LiDAR data displayed coded by intensity. The data was found to fit well in position. The point cloud data was classified with TerraSolid LiDAR processing software into ground and above ground returns using automated routines tailored to the project landcover and terrain. Classification of the point cloud followed the modified ASPRS classification scheme below: 0 - Created, never classified 1 - Unassigned classification 2 - Ground 9 - Water 14 - Above_Ground Re-processing: In 2016 the data was reprocessed by Aerial Surveys for LINZ relative to the NZVD2016 vertical datum, and supplied as 1:1000 nominal scale (2500 720m high x 480m wide subtiles per full NZ Topo50 sheet). Lakes and rivers were hydroflattened in the bare earth digital elevation model. The deliverables to LINZ were: 1m

gridded bare earth digital elevation model (DEM) 1m gridded digital surface model (DSM)
Classified point cloud Data hosted by OpenTopography was re-classified: the Above_Ground
(14) points were reclassified as Unassigned classification (1)

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