

# Canterbury - Amberley LiDAR 1m DSM (2012)

## Metadata

### File Identifier

48c10db0-f32f-0c01-fc25-3d334db92425

### Language

eng

### Character Set

#### Character Set Code

utf8

### Hierarchy Level

#### Scope Code

dataset

### Hierarchy Level Name

dataset

## Contact

### Responsible Party

#### Organisation Name

LINZ - 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**

info@linz.govt.nz

**Role****Role Code**

pointOfContact

**Date Stamp****Date**

2017-03-15

**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 - Amberley LiDAR 1m DSM (2012)

**Date****Date****Abstract**

This layer contains the DSM for LiDAR data from the Amberley area captured in 2012. The DEM is available as layer [Canterbury - Amberley Lidar 1m DEM (2012)] (<http://data.linz.govt.nz/layer/3546>). The index tiles are available as layer [Canterbury - Amberley Lidar Index Tiles (2012)](<http://data.linz.govt.nz/layer/3572>). The LAS point cloud and vendor project reports are available from [OpenTopography](<http://opentopo.sdsc.edu/datasets>). Lidar was captured for Environment Canterbury Regional Council by Aerial Surveys on 10 and 17 July 2012. The datasets were generated by Aerial Surveys and their subcontractors. The survey area includes the Amberley and Waipara township areas and adjacent coastal strips and river corridors. Data management and distribution is by 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 Pulse density is >1 pulse/square metre.  
Vertical accuracy specification is +/- 0.20m (95%). Vertical datum is NZVD2016.

## Status

### Progress Code

completed

## Point Of Contact

### Responsible Party

#### Organisation Name

LINZ - Land Information New Zealand

#### Position Name

Lidar Coordination Manager

### Contact Info

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New Zealand

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info@linz.govt.nz

### 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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Access Constraints

Restriction Code

copyright

Resource Constraints

Legal Constraints

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### Access Constraints

#### Restriction Code

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#### Restriction Code

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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

172.621862787172.822971495-43.2546026252-43.0406088094

### Distribution Info

#### Distribution

##### Transfer Options

##### Digital Transfer Options

##### On Line

##### Online Resource

##### Linkage

##### URL

<https://data.linz.govt.nz/layer/53547-canterbury-amberley-lidar-1m-dsm-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 in July 2012, using Aerial Surveys' Optech ALTM 3100EA LiDAR systems. 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% 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 base station maintained by Geosystems VRS Net3:- Base Station Position: 43 8 59.72500 S 172 44 26.44100 E 52.06 Ell Height APC 0.00m 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 0.108m vertical offset was applied to the data to bring it into terms with the survey



check site data. The standard deviation statistic is 0.037 m and a RMS of 0.039m. 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. All product deliverables were initially supplied in terms of NZTM and Lyttelton 1937 height datum. Classification of the point cloud followed the classification scheme below: 0 - Created, never classified 2 - Ground 14 - Above ground 15 - River\_Stream\_points 17 - Water\_Body\_points  
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). Class 15 and 17 water points were reclassified as Water (9).

## Metadata Constraints

### Legal Constraints

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#### Access Constraints

##### Restriction Code

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