

# Canterbury - Christchurch and Selwyn LiDAR 1m DSM (2015)

## Metadata

### File Identifier

b8859d61-3f84-5bac-f408-ce5952465fc2

### 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

2017-03-21

## 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 - Christchurch and Selwyn LiDAR 1m DSM (2015)

##### Date

##### Date

### Abstract

This layer contains the DSM for LiDAR data from the Christchurch and Selwyn areas captured in 2015. The DEM is available as layer [Canterbury - Christchurch and Selwyn LiDAR 1m DEM (2015)] (<http://data.linz.govt.nz/layer/3587>). The index tiles are available as layer [Canterbury - Christchurch and Selwyn LiDAR Index Tiles (2015)](<http://data.linz.govt.nz/layer/3578>). 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 AAM between 5 October and 7 November 2015. The datasets were generated by AAM and their subcontractors. The survey area includes Christchurch City and parts of the Selwyn district. 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

Planned pulse density is 4 pulses/square metre. Vertical accuracy specification is +/- 0.20m (95%). Horizontal accuracy specification is +/- 1.00m (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

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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  
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ANZLIC the Spatial Information Council

Role  
Role Code  
custodian

Resource Constraints  
Security Constraints  
Classification  
Classification Code  
unclassified

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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

171.657740799172.809757374-43.9132586936-43.2630076584

Distribution Info

Distribution

## Transfer Options

### Digital Transfer Options

#### On Line

##### Online Resource

###### Linkage

###### URL

<https://data.linz.govt.nz/layer/53588-canterbury-christchurch-and-selwyn-lidar-1m-dsm-2015/>

## 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 October and November 2015, using AAM's Riegl LMS-Q1560 and Leica ALS60 LiDAR systems. Survey Specification: Selwyn: □Device Name Q1560 □Half Scan Angle 29 degrees □Laser Pulse Rate 800 kHz □Overlap Percentage 20% □Average Point Spacing 3.1 pts/m2 □Laser Footprint 0.47m Christchurch: □ Device Name: ALS60 □ Half Scan Angle: 12.5 degrees □ Laser Pulse Rate: 145 kHz □ Overlap Percentage: 20% □ Minimum Point Density: 4 pts/m2 □ Laser Return Types: 1st, 2nd, 3rd and last □ Laser Intensity All returns □ File Format: ESRI ASCII Grid, ESRI Shapefile, LAS 1.2 □ Horizontal Datum: NZGD2000 □ Vertical Datum: NZVD2016 □ Map Projection: NZTM □ Vertical Accuracy Specification: ±0.10m Standard Error (68% confidence level or 1 sigma) □ Horizontal Accuracy Specification: ±0.50m Standard Error (68% confidence level or 1 sigma) Data processing: Laser strikes were classified into ground and non-ground points using a single algorithm across the project area. Manual checking and editing of the data classification further improved the quality of the terrain model. Further Processing: ArcGIS 10.1 Terrain and Surface Grids were derived using the Natural Neighbor interpolation. This method uses the closest triangles and applies weights to the proportionate areas from the grid cell centroid to interpolate the value. It uses known elevation data, it does not make any predictions regarding the surface and accurately depicts existing troughs and peaks in the data and supports irregular point spacing, which suits the nature LiDAR data. GPS base station support was sourced from Global Surveys CORS operating in Christchurch. The ground check points were field surveyed by Sounds Surveying Limited, these allowed an independent assessment of the accuracy of the ALS data.. 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 1 - Unclassified 2 - Ground 7 - Low/high points 9 - Water Re-processing: In 2016 the data was reprocessed by AAM 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

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##### Restriction Code

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