

Canterbury - Hawarden LiDAR 1m DEM (2015)

Title

Canterbury - Hawarden LiDAR 1m DEM (2015)

Creator

LINZ - Land Information New Zealand

Date

2015-04-01

Date

2017-03

Description

This layer contains the DEM for LiDAR data from the Hawarden area captured in 2015. The DSM is available as layer [Canterbury - Hawarden LiDAR 1m DSM (2015)] (<http://data.linz.govt.nz/layer/3551>). The index tiles are available as layer [Canterbury - Hawarden LiDAR Index Tiles (2015)] (<http://data.linz.govt.nz/layer/3584>). 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 1 April 2015, under survey name Hurunui. The datasets were generated by Aerial Surveys and their subcontractors. The survey area includes the Hawarden township area. 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 1.3 pulses/square metre. Vertical accuracy specification is per the ICSM LiDAR Acquisition Specifications and Tender Template NZ Version March 2011. Vertical datum is NZVD2016.

Source

Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft on 1 April 2015, using Aerial Surveys' Optech Orion H300 LiDAR system. Survey Specification: Scanner: Optech Orion H300 Flying height: 1200m AMGL Scan Angle: +/- 20 degrees Scan Frequency: 34Hz Pulse Rate 75kHz Swath Overlap: 30% Points Per Sqm: 1.3 Data processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSMMS software. This work was all undertaken in NZGD2000 coordinate system using the data collected from the following basestations: Project: Ecan Hawarden Date of Capture: 1/4/15 Base Station Type/Owner: Global Surveys Bench Mark: GSAM Base Station Position: 43 09 06.47086 S 172 43 45.04334 E 66.747 Ell Height Ant Height : 0.00 Phase Center Output LAS Projection: TM2000 Height: WGS84 Ellipsoid Validation was carried out using the guidelines contained in the ICSM specification template as required for this program. Vertical Accuracy Validation: The height accuracy of the LiDAR points was checked using check points collected during the ground control survey Horizontal Accuracy Validation The positional accuracy of the LiDAR data has been checked by overlaying Sounds Surveying Ltd surveyed data over the LiDAR data displayed coded by intensity. The data was found to fit well in position. 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 12 - Flight line overlap points 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)

Coverage

-42.975758899 172.623532847 -42.8782383064 172.735350633

Identifier

<https://data.linz.govt.nz/layer/53550-canterbury-hawarden-lidar-1m-dem-2015/>

Type

grid

Language

eng

Subject

New Zealand

Subject

LAND-Topography

Subject

LAND-Cover

Subject

elevation

Subject

imageryBaseMapsEarthCover