

Otago LiDAR 1m DSM (2016)

Title

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Creator

LINZ - Land Information New Zealand

Date

2016-03-01

Description

This layer contains the DSM for LiDAR data from the Otago Region captured in 2016. - The DEM is available as layer [Otago LiDAR 1m DEM (2016)] (<https://data.linz.govt.nz/layer/99123-otago-lidar-1m-dem-2016/>). - The index tiles are available as layer [Otago LiDAR Index Tiles (2016)] (<https://data.linz.govt.nz/layer/99230-otago-lidar-index-tiles-2016/>). - The LAS point cloud and vendor project reports are available from [OpenTopography] (<http://opentopo.sdsc.edu/datasets>). Lidar was captured for Otago Regional Council by Aerial Surveys in March and April 2016. The datasets were generated by Aerial Surveys and their subcontractors. 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 2 pulses/square metre. Refer to individual survey reports for accuracy statistics. Vertical datum is NZVD2016.

Source

Data Acquisition: Airborne Laser Scanner (ALS) data was acquired - from a fixed wing aircraft on: March and April 2016 using Aerial Surveys OptechOrion H300 LiDAR system. Survey Specifications: Please refer to original survey reports. Data processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSPac software. Benchmark: Please refer to original survey reports. Base Stations: Please refer to original survey reports. Benchmarks: Please refer to original survey reports. Base Station Positions: Please refer to original survey reports. Antenna Height: Please refer to original survey reports. 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 please refer to original survey reports. For the specification accuracy of the classified LiDAR points please refer to original survey reports. 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. The point cloud data was then classified with TerraSolid LiDAR processing software into ground and above ground returns using automated routines tailored to the project landcover and terrain. For Point Classification Scheme please refer to the original survey reports. All product deliverables are supplied in terms of NZTM map projection. For the classification scheme of the point cloud please refer to the original survey reports. Re-processing: In 2018 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). Breaklines have been used where required to ensure hydro flattening on the DEM products. Lakes and large 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 Reprocessed Point Cloud Data was reclassified by LINZ, points classified as 3 - Above Ground were reclassified to 1 - Unassigned. Classification of the Point Cloud available on Open Topography are as follows; 1 - Unassigned 2 - Ground

Type

grid

Language

eng

Subject

New Zealand

Subject

elevation