Wellington City LiDAR 1m DSM (2019-2020)

Title

Wellington City LiDAR 1m DSM (2019-2020)

Creator

LINZ - Land Information New Zealand

Date

2019-03-20

Description

This layer contains the DSM for LiDAR data in the Wellington Region including Wellington City as well as the surrounding area captured between 2019 and 2020. - The DEM is available as layer [Wellington City LiDAR 1m DEM (2019-2020)](https://data.linz.govt.nz/layer/105023). - The index tiles are available as layer [Wellington City LiDAR Index Tiles (2019-2020)](https://data.linz.govt.nz/layer/105025). - The LAS point cloud and vendor project reports are available from [OpenTopography] (https://portal.opentopography.org/datasets?loc=New%20Zealand). LiDAR was captured for Wellington City Council by Aerial Surveys from 20 March 2019 to 14 March 2020. These 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 specification is at a minimum of 16 pulses/square metre. Vertical datum is NZVD2016.

Source

Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft from 20 March 2019 to 14 March 2020, using Aerial Surveys Optech Galaxy Prime LiDAR system. Survey Specification: - Scanner: Optech Galaxy Prime - Flying Height: 1300 m AMGL - Scan Angle: ±17 degrees - Scan Frequency: 80Hz - Pulse Rate: 500kHz - Swath Overlap: 55% - Points Per M2: 16 Data Processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSPac software. Base Station Positions: PP-RTX 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 Sounds Surveying Ltd. This was done by calculating height differences statistics between a TIN of the LiDAR ground points and the checkpoints. The standard deviation statistic is 0.041m; a RMS of 0.041m and the average difference is -0.001m. LiDAR is relative to the control check points. 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 withTerraSolid LiDAR processing software into ground and above ground returns using automated routines tailored to the project landcover and terrain. All product deliverables supplied in terms of NZTM map projection and NZVD2016 vertical datum. Classification of the point cloud followed the classification scheme below: 1 - Unclassified 2 - Ground 3 - Low Vegetation 4 - Medium Vegetation 5 - High Vegetation 6 - Building 7 - Low Noise 9 - Water 14 - Wire Conductor (Major Transmission Lines) 18 - High Noise 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

Coverage

-41.3681707166 174.696323601 -41.1456442241 174.867056822

Identifier

https://data.linz.govt.nz/layer/105024-wellington-city-lidar-1m-dsm-2019-2020/

Type

grid

Language

eng

Subject
New Zealand

Subject
elevation