

Waikato - Thames LiDAR 1m DEM (2017-2019)

Title	Waikato - Thames LiDAR 1m DEM (2017-2019)
Creator	Toitū Te Whenua Land Information New Zealand
Date	2017-02-07
Description	<p>This layer contains the DEM for LiDAR data in the Waikato Region covering Thames Township captured between 2017 and 2019. - The DSM is available as layer [Waikato - Thames 1m LiDAR DSM (2017-2019)] (https://data.linz.govt.nz/layer/104173). - The index tiles are available as layer [Waikato - Thames LiDAR 1m Index Tiles (2017-2019)](https://data.linz.govt.nz/layer/104174). - The LAS point cloud and vendor project reports are available from [OpenTopography](https://portal.opentopography.org/datasets?loc=New%20Zealand). LiDAR was captured for Waikato Regional Council by Aerial Surveys in February 2017, March 2018 and April 2019. These datasets were generated by Aerial Surveys and their subcontractors. Data management and distribution is by Toitū Te Whenua 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 4.23 pulses/square metre. Vertical datum is NZVD2016.</p>
Source	<p>Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft on between 2017 and 2019, using Aerial Surveys Optech Orion H300 LiDAR system. Survey Specification: • Scanner: Optech Orion H300 • Flying Height: 1100 m AMGL • Scan Angle: ±30 degrees • Scan Frequency: 62.0Hz • Pulse Rate: 200kHz • Swath Overlap: 35% • Points Per M2: 4.23 Data Processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSpac software. Base Station Positions: Please see survey report for more details. 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 0.031 m; a RMS of 0.037 m and the average difference is -0.021m. 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 with TerraSolid 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 height datum. Classification of the point cloud followed the classification scheme below: 2 - Ground 14 - Above Ground Above_Ground (14) points was reclassified by LINZ as Unassigned classification (1) before providing the classified point cloud data to Open Topography. 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</p>
Coverage	-37.3931412318 175.523206849 -37.1172108307 175.694364485
Identifier	https://data.linz.govt.nz/layer/104172-waikato-thames-lidar-1m-dem-2017-2019/
Type	grid
Language	

eng

Subject

New Zealand

Subject

elevation