

Northland - Whangarei Heads LiDAR Index Tiles (2016)

Title	Northland - Whangarei Heads LiDAR Index Tiles (2016)
Creator	LINZ - Land Information New Zealand
Date	2016-11-21
Description	<p>This layer contains the Index Tiles for LiDAR data in the Northland Region surrounding Whangarei Heads captured in 2016. - The DEM is available as layer [Northland - Whangarei Heads LiDAR 1m DEM (2016)] (https://data.linz.govt.nz/layer/104236). - The DSM is available as layer [Northland - Whangarei Heads LiDAR 1m DSM (2016)](https://data.linz.govt.nz/layer/104237). - The LAS point cloud and vendor project reports are available from [OpenTopography](http://opentopo.sdsc.edu/datasets). LiDAR was captured for Land Information New Zealand by Aerial Surveys in November 2016. 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 2 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 21 and 22 November 2016, using Aerial Surveys Optech Orion H300 LiDAR system. Survey Specification: • Scanner: Optech Orion H300 • Flying Height: 1475 m AMGL • Scan Angle: ± 20 degrees • Scan Frequency: 45.0Hz • Pulse Rate: 1750kHz • Swath Overlap: 30% • Points Per M2: 2 Data Processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSpac software. Base Station Position: WHNG owned by LINZ -35 48 13.577724 S 174 18 52.4394 E 172.775 Ell Height 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 0.019 m; a RMS of 0.038 m and the average difference is -0.03 m. 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. There are no (7) Noise, (9) Water and (12) Overlap points in the data even though these were referenced in the report 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>
Type	vector
Language	eng
Subject	New Zealand
Subject	elevation