

# Bay of Plenty - Tauranga and Coast LiDAR 1m DSM (2015)

Title	Bay of Plenty - Tauranga and Coast LiDAR 1m DSM (2015)
Creator	LINZ - Land Information New Zealand
Date	2015-11-08
Date	2017-03
Description	<p>This layer contains the DSM for LiDAR data from the Bay of Plenty coast captured in 2015. The DEM is available as layer [Bay of Plenty - Tauranga and Coast LiDAR 1m DEM (2015)] (<a href="http://data.linz.govt.nz/layer/3556">http://data.linz.govt.nz/layer/3556</a>). The index tiles are available as layer [Bay of Plenty - Tauranga and Coast LiDAR Index Tiles (2015)](<a href="http://data.linz.govt.nz/layer/3575">http://data.linz.govt.nz/layer/3575</a>). The LAS point cloud and vendor project reports are available from [OpenTopography](<a href="https://portal.opentopography.org/datasets?loc=New%20Zealand">https://portal.opentopography.org/datasets?loc=New%20Zealand</a>). Lidar was captured for BOPLASS Ltd. by Aerial Surveys in 2015. The datasets were generated by Aerial Surveys and their subcontractors. The survey area includes the Tauranga and Whakatane urban areas and the greater coastal strip. 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 1.0 pulses/square metre. Vertical datum is NZVD2016.</p>
Source	<p>Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft in 2015, using Aerial Surveys' Optech Orion H300 LiDAR system. Survey Specification: □ Scanner: Optech Orion H300 □ Flying height: 1200m AMGL □ Scan Angle: +/- 19 degrees □ Scan Frequency: 42.4Hz □ Pulse Rate 70kHz □ Swath Overlap: 35% □ Points Per Sqm: 1.0 Data processing: The LiDAR sensor positioning and orientation (POS) was determined using the collected GPS/IMU datasets and Applanix POSMMS software. Base Station Positions: WHKT 37 58 54.07040 S 177 00 49.96000 E 231.871 Ell Height TRNG 37 43 43.72352 S 176 15 39.15815 E 151.13 Ell Height Antenna Height: WHKT .002 Bot of Mount TRNG .055 Bot of Mount 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 Opus International Consultants 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 0.029 m; a RMS of 0.045 m and the average difference is -0.032 m. The positional accuracy of the LiDAR data has been checked by overlaying Opus International Consultants 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 were initially supplied in terms of NZTM and Muturiki 1953 height datum. 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</p>
Coverage	-38.0514249916 175.902491748 -37.3865694126 177.442206781
Identifier	<a href="https://data.linz.govt.nz/layer/53557-bay-of-plenty-tauranga-and-coast-lidar-1m-dsm-2015/">https://data.linz.govt.nz/layer/53557-bay-of-plenty-tauranga-and-coast-lidar-1m-dsm-2015/</a>
Type	

grid

Language

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Subject

New Zealand

Subject

LAND-Topography

Subject

LAND-Cover

Subject

elevation

Subject

imageryBaseMapsEarthCover