

Otago - Dunedin and Mosgiel LiDAR Index Tiles (2021)

Metadata

File Identifier

3714d546-e98e-a720-7da0-ad96871a36db

Language

eng

Character Set

Character Set Code

utf8

Hierarchy Level

Scope Code

dataset

Hierarchy Level Name

dataset

Contact

Responsible Party

Organisation Name

Toitū Te Whenua Land Information New Zealand

Position Name

Lidar Coordination Manager

Contact Info

Contact

Phone

Telephone

Voice

04 4600110

Address

Address

Delivery Point

155 The Terrace

City

Wellington

Postal Code

6011

Country

New Zealand

Electronic Mail Address

customersupport@linz.govt.nz

Role

Role Code

pointOfContact

Date Stamp

Date

2022-05-10

Metadata Standard Name

ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005, Geographic information - Metadata

Metadata Standard Version

1.1

Reference System Info

Reference System

Reference System Identifier

Identifier

Code

2193

Identification Info

Data Identification

Citation

Citation

Title

Otago - Dunedin and Mosgiel LiDAR Index Tiles (2021)

Date

Abstract

This layer contains the index tiles for LiDAR data in the Otago Region for Dunedin and Mosgiel, captured on 24 June 2021. - The DSM is available as layer [Otago - Dunedin and Mosgiel LiDAR 1m DSM (2021)](<https://data.linz.govt.nz/layer/107705>). - The DEM is available as layer [Otago - Dunedin and Mosgiel LiDAR 1m DEM (2021)](<https://data.linz.govt.nz/layer/107710>). - The LAS point cloud and vendor project reports are available from [OpenTopography] (<https://portal.opentopography.org/datasets?search=new%20zealand>). LiDAR was captured for Otago Regional Council by AAM Ltd on 24 June 2021. These datasets were generated by AAM 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 8 pulses/square metre. Vertical Accuracy Specification is +/- 0.2m (95%) Horizontal Accuracy Specification is +/- 1.0m (95%) Vertical datum is NZVD2016.

Status

Progress Code

completed

Point Of Contact

Responsible Party

Organisation Name

Toitū Te Whenua Land Information New Zealand

Position Name

Lidar Coordination Manager

Contact Info

Contact

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04 4600110

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155 The Terrace
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Role
Role Code
pointOfContact

Resource Maintenance
Maintenance Information
Maintenance And Update Frequency
Maintenance Frequency Code
notPlanned

Resource Format
Format
Name
*.xml
Version
Unknown

Descriptive Keywords
Keywords
Keyword
New Zealand
Type
Keyword Type Code
theme

Thesaurus Name
Citation
Title
ANZLIC Jurisdictions
Date
Edition
Version 2.1

Edition Date

Date

2008-10-29

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-jurisdic.xml#anzlic-jurisdic>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Resource Constraints

Security Constraints

Classification

Classification Code

unclassified

Resource Constraints

Legal Constraints

Use Limitation

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Restriction Code

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Use Constraints

Restriction Code

license

Spatial Representation Type Code

vector

Representative Fraction

Denominator

Integer

1000

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

elevation

Extent

EX_ Extent

Geographic Element

EX_ Geographic Description

Identifier

Authority

Citation

Title

ANZMet Lite Country codelist

Date

Edition

Version 1.0

Edition Date

Date

2009-03-31

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-country.xml#Country>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Code

nzl

Extent

EX_ Extent

Geographic Element

EX_ Geographic Bounding Box

170.3267999975236170.5369878925774-45.91761749642665-45.84925624449488

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.linz.govt.nz/layer/107706-otago-dunedin-and-mosgiel-lidar-index-tiles-2021/>

Data Quality Info

DQ_ Data Quality

Scope

DQ_Scope

Level

Scope Code

dataset

Level Description

Scope Description

Other

dataset

Lineage

LI_Lineage

Statement

Data Acquisition: Airborne Laser Scanner (ALS) data was acquired from a fixed wing aircraft on 24 June 2021, using AAM's Optech Galaxy Prime 473 LiDAR system. Survey Specification: □ Scanner: Optech Galaxy Prime 473 □ Flying Height: 1070 m AGL □ Scan Angle: ±23 degrees □ Scan Frequency: 66 Hz □ Pulse Rate: 600 kHz □ Swath Overlap: 30% □ Swath Points Per M2: 8 Data Processing: RTX processing was utilised to calculate the GPS trajectory. Trimble CenterPoint® RTX™ is a proprietary GPS, GLONASS, BeiDou, and QZSS enabled technology that provides high-accuracy GNSS positioning worldwide without the use of traditional local base stations or a VRS network. By combining real time data from a global reference station infrastructure with innovative positioning and compression algorithms, Trimble RTX technology computes centimeter-level positions based on satellite orbit and clock information. Trajectory processing provides the accurate position and orientation of the sensor, essential for georeferencing the dataset. All initial processing was undertaken in UTM60S/ITRF2008. Reprojection and application of the NZGD2000 deformation model converted the data to NZTM/NZGD2000 using concord software. To convert the point cloud heights from ellipsoidal to NZVD2016 heights, a geoid adjustment was performed using the NZGeoid2016 separation model. AAM uses proprietary automated ground classification routines in TerraScan, based upon algorithms tailored for major terrain/vegetation combinations, to initially classify the laser strikes into ground / non-ground classification and to generate an accurate ground surface. The ground classification is then manually reviewed and edited to reach ICSM level 2 standards. Following this process, non-ground classes are then classified using automated routines and macros. Water was also manually reviewed to ensure correct presentation in the downstream elevation products (DEM and DSM). The definition of the ground points may be less accurate under vegetation. Classification of the point cloud follows the classification scheme below: 1 - Unclassified 2 - Ground 3 - Low Vegetation 4 - Medium Vegetation 5 - High Vegetation 6 - Buildings 7 - Low Noise 9 - Water 17 - Bridge Deck 18 - High Noise WSP NZ Ltd undertook a field survey to acquire ground test points, assumed to be error-free, to validate the accuracy of the LiDAR data and derivative products. The test points were uniformly distributed across the area and located on clear ground. Comparison of the field test points with elevations interpolated from measured data, yielded the following accuracy assessment: □ Test point sites: 6 □ No. points: 393 □ Mean difference: 0.007 m □ St. Deviation: 0.025 m □ Standard Error (RMS): 0.026 m The mean elevation difference was removed from the supplied data. The Fundamental Vertical Accuracy is therefore 5 cm (RMS x 1.96), which are within the RMS specification of 20 cm at 95% confidence. The expected horizontal accuracy was calculated by Flying Height Above Ground(1070 m)/10,000 therefore is 21 cm at 95% CI for this dataset, which is within the specification of 100 cm. The DEM was generated from the ground points to define the bare earth ground surface. Hydroflattening was performed through breaklines that were drawn manually and the coastline was clipped to a polygon that was derived from the water points boundary, to give a clean presentation along the coast. The DSM was generated using first return ground and non ground classes, excluding high and low noise. The deliverables to LINZ were: 1m gridded bare earth digital elevation model (DEM) 1m gridded digital surface model (DSM) Classified point cloud All product deliverables supplied in terms of NZTM map projection and NZVD2016 vertical datum.

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