

West Coast 0.3m Rural Aerial Photos (2015-2016)

Metadata

File Identifier

afd807e1-4bef-8be8-f6d0-716e48088eae

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

National Imagery Manager

Contact Info

Contact

Phone

Telephone

Voice

04 4600110

Address

Address

Delivery Point

155 The Terrace

City

Wellington

Postal Code

6145

Country

New Zealand

Electronic Mail Address

customersupport@linz.govt.nz

Role

Role Code

pointOfContact

Date Stamp

Date

2017-09-12

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

West Coast 0.3m Rural Aerial Photos (2015-16)

Date

Abstract

Orthophotography in the West Coast Region taken in the flying season (summer period) 2015 -16. Coverage is in the Grey and Buller districts. Imagery was captured for the 'West Coast Regional Council' by Aerial Surveys Ltd, Unit A1, 8 Saturn Place, Albany,0632, New Zealand. Data comprises: •1,346 ortho-rectified RGB GeoTIFF images in NZTM projection, tiled into the LINZ Standard 1:5,000 tile layout •Tile layout in NZTM projection containing relevant information. The supplied imagery is in terms of New Zealand Transverse Mercator (NZTM) map projection. The products are tiled into NZTopo50 1:5,000 tiles. Please refer to the supplied tile layout shape file for specific details, naming conventions, etc. Imagery supplied as 30cm pixel resolution (0.3m GSD), 3-band (RGB) uncompressed GeoTIFF. The final spatial accuracy is ± 0.6 m @ 1 sigma. Index tiles for this dataset are available as layer [West Coast 0.3m Rural Aerial Photos Index Tiles (2015-16)] (<http://data.linz.govt.nz/layer/88088>)

Status

Progress Code

completed

Point Of Contact

Responsible Party

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Position Name

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pointOfContact

Resource Format

Format

Name

*.xml

Version

Unknown

Resource Constraints

Security Constraints

Classification

Classification Code

unclassified

Resource Constraints

Legal Constraints

Use Limitation

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Spatial Representation Type Code

grid

Representative Fraction

Denominator

Integer

5000

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

imageryBaseMapsEarthCover

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

171.066643806172.427490711-42.8479877173-41.0724291742

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.linz.govt.nz/layer/88143-west-coast-03m-rural-aerial-photos-2015-2016/>

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: The aerial photography for this project was captured within the 2015/16 flying season. All photography was captured using Vexcel's digital UCLp & UCE camera and flown at: • Rural: 0.3 m GSD: 18928 ft (5769 m) flying height Camera Lens: 70 mm & 100 mm Sun Angle Minimum of +35 degrees Data Processing All aspects of the data processing from imagery processing to DTM creation and ortho production and product deliverables was undertaken in-house by Aerial Surveys staff. Map Projection All spatial data for this project provided in terms of New Zealand Transverse Mercator (NZTM) map projection. The datum is New Zealand Geodetic Datum 2000. The height datum is orthometric Lyttelton 1937 (sea level). Image Processing and Aerial Triangulation All imagery has gone through QA checks ensuring there is no cloud cover and cloud shadow. During aerial acquisition the aircraft on-board GPS navigation data and ground base station data collected and post processed. Imagery processed to level 3 and checked for colour correctness/radiometry and even tonal balance across each project area. The aerial triangulation brings together the GPS data and imagery using a two part process which stitches the imagery together using tie point matching for the relative orientation phase and observing ground control points for the absolute orientation phase. LINZ control, 8th order horizontal and 4th order vertical and other existing control from Aerial Surveys control data base were used to strengthen the block adjustment or as independent checks on position during final QA of the ortho imagery. A final report is generated to check RMSE values are within specification. DTM Creation The DTM creation for the rural areas was collected from stereo imagery using photogrammetric techniques, largely automated pixel matching and auto-correlation process that creates mass points of the terrain surface with further manual editing to remove points on water bodies and minimal breaklines collected to ensure gross errors were corrected and the DTM generally reflects the terrain surface. The final DTM took the form of mass points only, suitable for the ortho rectification process. Rural DEM - 8717 km² The DTM points were extracted as a gridded (10 m) DEM and supplied as tiled files aligned to LINZ 1:5000 sheet layout. The DEM data is not suitable for contour generation. DTM Accuracy: ±0.8 m @ 68% confidence level in clear open areas (1 sigma) RGBI Ortho Rectification Process Ortho rectification is the process of removing (from the image) the effects of camera tip/tilt and displacement caused by terrain relief. During this process each frame is 'draped' over the terrain model and the photograph then becomes 'scaled' and 'levelled' in terms of true ground coordinates. The generation of seamlines between frames follow natural physical features such as ridges, valleys, roads and rivers. The seamlines are used for the final ortho mosaic that stitches the imagery together using feather mosaicking techniques. The ortho imagery is then aligned to LINZ sheet tile layout. The ortho imagery was processed to RGBI to ensure a consistent dataset is maintained for the RGB and RGBI ortho tiles including the same seamlines. Minimal colour adjustment was undertaken in the RGB, generally over water areas and along coastal foreshore for colour matching and to minimise glare.

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