Manawatu Whanganui 0.3m Rural Aerial Photos (2016-2017)

- Metadata
  - File Identifier
    - 311081bf-2228-3e45-a49d-3669e4a05ddb
  - 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

Manawatu Whanganui 0.3m Rural Aerial Photos (2016-17)

Date

Abstract

Orthophotography in the Manawatu-Whanganui Region Region taken in the flying season (summer period) 2016 -17. Coverage is in the Ruapehu, Wanganui, Rangitikei, Manawatu, Horowhenua and Tararua Districts. Imagery was captured for the ‘MW LASS’ by Aerial Surveys Ltd, Unit A1, 8 Saturn Place, Albany,0632, New Zealand. Data comprises: •981 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 @ 68% confidence level in clear open spaces. Index tiles for this dataset are available as layer [Manawatu Whanganui 0.3m Rural Aerial Photos Index Tiles (2016-17)] (http://data.linz.govt.nz/layer/88095)

Status

Progress Code

completed

Point Of Contact

Responsible Party

Organisation Name

Toitū Te Whenua Land Information New Zealand

Position Name

National Imagery Manager

Contact Info

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Role
Role Code
pointOfContact

Resource Format
Format
Name
*.xml

Version
Unknown

Resource Constraints
Security Constraints
Classification
Classification Code
unclassified

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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
174.664936399175.688333566-39.9890840126-38.4532011493

Distribution Info
Distribution
Transfer Options

- Digital Transfer Options
  - On Line
    - Online Resource
      - Linkage
        - URL
          - https://data.linz.govt.nz/layer/88145-manawatu-whanganui-03m-rural-aerial-photos-2016-2017/

- 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 2017 flying season (September 2016 – April 2017) on the following dates: 16 March 2017 19 March 2017 08 April 2017 All photography was captured using Vexcel's digital UltraCam Eagle flown at: 0.3 m GSD: 18,928 ft (5,769 m) flying height Camera Lens: 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 2000 map projection (NZTM2000). The datum is New Zealand Geodetic Datum 2000 (NZGD2000). The height datum is orthometric Moturiki 1953 (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 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 extensive further manual editing to remove points on water bodies and extensive breaklines added around water bodies and along all ridges, valleys and areas of steep terrain change, such as kerbs, retaining walls, drains. In areas of dense vegetation form lines are collected. The final DTM took the form of breaklines and mass points. A Triangulated Irregular Network (TIN) was then created and used for the ortho rectification process. DTM Accuracy: ±0.6 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 extracted aligned to LINZ 1:5000 sheet tile layout.

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