

Taranaki 0.4m Rural Aerial Photos (2011-2012)

Metadata

File Identifier

| 8f73cfe4-e752-08e3-9121-bf9813249c05

Language

| eng

Character Set

Character Set Code

| utf8

Hierarchy Level

Scope Code

| dataset

Hierarchy Level Name

| dataset

Contact

Responsible Party

Organisation Name

| LINZ - 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

info@linz.govt.nz

Role**Role Code**

pointOfContact

Date Stamp**Date**

2014-03-21

Metadata Standard NameANZLIC 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**

Taranaki 0.4m Rural Aerial Photos (2011 - 2012)

Date**Abstract**

Orthophotography for the Taranaki region taken in the flying season (summer period) 2011 - 2012. Coverage encompassed the entire Taranaki Regional Council area. Imagery was captured for the 'Taranaki Regional Consortium' by NZ Aerial Mapping Ltd, 208 Warren Street, PO Box 6, Hastings 4156, New Zealand. Data has subsequently been provided to LINZ and this comprises:

- 881 x ortho-rectified RGB GeoTIFF images in NZTM projection, tiled into the LINZ Standard 1:5,000 tile layout
- Shape file of the photo-centres in NZTM projection containing relevant information.
- 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 40cm pixel resolution (0.4m GSD), 3-band (RGB) uncompressed GeoTIFF. The final spatial accuracy is +/-2.5m (@ 90% confidence). Index tiles for this dataset are available as layer [Taranaki 0.4m Rural Aerial Photos Index Tiles (2011-2012)] (<http://data.linz.govt.nz/layer/1879>).

Status

Progress Code

completed

Point Of Contact

Responsible Party

Organisation Name

LINZ - Land Information New Zealand

Position Name

National Imagery Manager

Contact Info

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Voice

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info@linz.govt.nz

Role

Role Code

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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Access Constraints

Restriction Code

copyright

Resource Constraints

Legal Constraints

Use Limitation

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Use Constraints

Restriction Code

copyright

Resource Constraints

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Use Limitation

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Use Constraints

Restriction Code

license

Spatial Representation Type Code

grid

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

imageryBaseMapsEarthCover

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

173.723247705174.958530379-39.8962506376-38.6957157113

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.linz.govt.nz/layer/51869-taranaki-04m-rural-aerial-photos-2011-2012/>

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 project area covered the New Plymouth DC, South Taranaki DC & part of the Stratford DC districts. The eastern section of Stratford DC was covered by the MWLass rural ortho project the previous year. The coverage flown is approximately 7,600 sq km. The NZAM number pertaining to this photographic survey is Sn50974D. Digital imagery was collected between December 2011 – March 2012 (see photocentre shape file for specific frame dates), using NZ Aerial Mapping's Microsoft UCX & UCXp large-format digital cameras. The imagery was collected flying between 18,000' – 22,000' above mean ground, using 60% forward & 30% minimum overlaps. Collected imagery was cloud-free, sun angle of not less than 35-degrees. A total of 1,193 frames were accepted for final processing into orthos.

During the aerial data acquisition use was made of NZAM-established geodetic marks (NZAM0033 at Hawera Airport) & a new-established mark at New Plymouth Airport. NZAM's Rockwell Commander 690, Aero Commander 680 & Cessna 402 aircraft were used for the survey. ~16 hours 'on-survey' flying time was required to complete the photography. Data Processing: Image Processing was undertaken following QA of the flown photography. Initial check's included ensuring there is was no evidence of cloud, cloud-shadow, smoke, haze or other issues which may cause problems during downstream processing. Imagery was then converted from 'Level O' (readable only in the proprietary image software) into 'Level 3' - raw, uncorrected RGB imagery. Aerial Triangulation (AT) followed. This process relates one frame to the next, then one run to the next until a continuous 'parallax-free' block of photography is created. Introduction at this point of the surveyed ground control helps 'tie' the block of photography to true ground coordinates from which mapping then commences. NZAM use UltraMap v2.3 & ORIMA software for the image processing & AT components. 13 x photo-identifiable detail points were surveyed, post-photography, via Bland & Howarth, New Plymouth. Trigs and other existing control from previous projects were used to strengthen the block adjustment or as independent checks on position during final QA of the orthos. DTM creation was undertaken by NZAM's Indian-based subcontractors – Genesys International Corporation once AT was complete. Each pair of overlapping photographs was viewed in a stereo environment and a terrain model created for that portion of the earth's surface. Pixel matching & auto-correlation techniques were used - as they are a quick & efficient method of achieving the desired result. Manual checks by stereo compilation staff were done to ensure gross errors were corrected & the DTM accurately reflected the terrain surface. Final DTM's took the form of breaklines (along ridges, valleys & sharp terrain changes) and masspoints (individual xyz points) to infill & add density to the ground model. A Triangulated Irregular Network (TIN) was then created & used for the ortho-rectification process. Ortho-rectification is the process of removing (from the image) the effects of camera tip / tilt & displacement caused by terrain relief. During this process each frame is 'draped' over the terrain model, the photograph then becomes 'scaled' & 'levelled' and in terms of true ground coordinates. Mosaic lines between frames were created, edited (normally along physical features such as roads, rivers, ridges or similar geographical features) & used during the final 'stitching' of frames together. Tiling was then done into the agreed tile layout & rectified imagery output in the appropriate formats.

Metadata Constraints

Legal Constraints

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