

# Hawkes Bay 0.4m Rural Aerial Photos Index Tiles (2010-2011)

## Metadata

### File Identifier

3325bb79-98e5-eb69-7980-5a63fe9a68b6

### 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

2014-03-24

**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

Hawkes Bay 0.4m Rural Aerial Photos Index Tiles (2010 - 2011)

## Date

**Abstract**

Index Tiles ONLY, for actual orthophotos see layer [Hawkes Bay 0.4m Rural Aerial Photos (2010 - 2011)](<http://data.linz.govt.nz/layer/1778>). Orthophotography for the Hawkes Bay region taken in the flying season (summer period) 2010 - 2011. Coverage encompassed the entire Hawkes Bay Regional Council area. Imagery was captured for 'NZ Aerial Mapping (NZAM) and Terralink International (TIL)' 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:

- 1,753 x 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 40cm pixel resolution (0.4m GSD), 3-band (RGB) uncompressed GeoTIFF. The final spatial accuracy is +/-2.5m (@ 90% confidence).

**Status**

## Progress Code

completed

**Point Of Contact**

## Responsible Party

## Organisation Name

LINZ - Land Information New Zealand

## Position Name

National Imagery Manager

## Contact Info

## Contact

## Phone

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04 4600110

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Electronic Mail Address  
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  
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Restriction Code  
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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  
176.080071737178.023741525-40.4415604933-38.56838949

Distribution Info  
Distribution  
Transfer Options  
Digital Transfer Options  
On Line  
Online Resource  
Linkage  
URL  
<https://data.linz.govt.nz/layer/51888-hawkes-bay-04m-rural-aerial-photos-index-tiles-2010-2011/>

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 local authority areas of Wairoa DC, Napier CC, Central Hawkes Bay DC, Hastings DC & the SE part of Taupo DC that falls within the Hawkes Bay RC jurisdiction. The coverage flown is approximately 15,150 sq km. The NZAM number pertaining to this photographic survey is Sn50925D. Digital imagery was collected between November 2010 – January 2011 (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 2,443 frames were accepted for final processing into orthos. During the aerial data acquisition use was made of a mixture of NZAM-established geodetic marks including NZAM0027 at Bridge Pa (Hastings) Airport & NZAM0031 at Wairoa Airport. LINZ-maintained geodetic mark B47F (Taupo) was also used. NZAM’s Rockwell Commander 690, Aero Commander 680 & Cessna 402 aircraft were used for the survey. ~24 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. 19 x photo-identifiable detail points were surveyed, post-photography, via Vince Belgrave of Sounds Surveying Ltd, Picton. 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

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