# Data Supply Metadata s7

| Project | Christchurch Earthquake Feb 2011 | 11.010 |
|---------|----------------------------------|--------|
| Sub Area | Akaroa and Christchurch Coverage | |

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| **Summary of Data** | This dataset is the seventh of a series that NZ Aerial Mapping (NZAM) is producing in response to the recent earthquake in Canterbury. The dataset contains orthophotos over Akaroa, and a resupply of the complete data set over Christchurch. Users wishing to append to their existing data need only extract the Akaroa data from this hard drive. Users wishing to obtain the entire data set should extract all data from this hard drive. The maps at the end of this document show the coverage. The orthophotos have a ground sample distance of 10cm. The data supply includes the following products:<br><br>• Aerial Photography<br>• Photo centre positions<br>• Orthophotos<br>• Orthophoto tile layout<br>• Mosaic seam lines |

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| **Data Acquisition** | The photography was collected flying at 1,600m above the ground using a Vexcel UCXp large format digital aerial camera. The photography was acquired on 24 February 2011 between the hours of 11am and 6pm.<br><br>To support the georeferencing of the photography a GPS base station receiver was operated at a temporary survey mark that NZAM established at Christchurch Airport. |

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| **Data Processing** | In order to expedite their production these orthophotos were produced using a number of shortcuts that would not be followed for a fully specified orthophoto project. While the orthophotos are fit for use by experienced geodata users they are not suitable for general distribution.<br><br>The aerial photos position and orientation (POS) were determined using the POS observations collected at the GPS base station and in the aircraft. This data was processed using NZGD2000 reference system. A coordinate for the base station was computed using single baseline processing and data supplied by to NZAM by GNS, from the GeoNet station MQZG. Given the magnitude of the earthquake it is likely that the location of MQZG has changed. However, as no information is available yet it had to be assumed that the coordinate for MQZG had not changed.<br><br>For the orthophoto generation NZAM used DTM sourced from within our archive. This DTM was not edited or checked for change.<br><br>Automated mosaic seam line placement was used during the orthophoto production. We chose to use a simple 'most nadir 'algorithm for their placement. This selects the most central portion of each available photo and thereby helps minimise the amount of perspective view lean on buildings. The seam lines can be clearly seen on some of the photography. |

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| **Data Supply** | The geodata is all in terms of New Zealand Transverse Mercator map projection.<br><br>The folder *AerialPhotography* contains low resolution versions of the aerial photos. The data is in jpeg file format. The full resolution images are approximately 600 Mbytes each and therefore it is not practical to supply all of these for rapid distribution.<br><br>The folder *Orthophotos* contains the orthophotos. They are tiled into NZTopo50 1:1000 tiles and named using the convention NZTopo50PrimeAABB (e.g. BX0302). The orthophotos are supplied in ECW file format.<br><br>The folder *SupportData* contains photo centres for the aerial photography, the orthophoto tile layout and a seam line file. These are all in ESRI shape file format. The seam line file is provided to aid photo interpretation by making users aware of where there may be seam line mismatches in the dataset.<br><br>If you have requirements for the data in other file formats, map projections please contact NZAM. |

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| **Quality Exceptions** | The orthophotos have only had a cursory review.  Given that the DTM was not updated and checked it is likely that the orthophotos will include areas were the imagery appears smeared or is out of position.<br><br>While we endeavoured to collect cloud free photography there is the odd puff of cloud and cloud shadow in the imagery.  This would not be acceptable for a fully specified orthophoto project, but they do not significantly impact on the useability of the photography for the earthquake response work. |

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| **Supplier** | NZ Aerial Mapping Ltd |
| **Address** | 208 Warren Street<br>PO Box 6<br>Hastings 4158<br>New Zealand |
| **Phone** | 64-6-873 7550 |
| **Supplier Contact** | David Napier  (david.napier@nzam.com) |

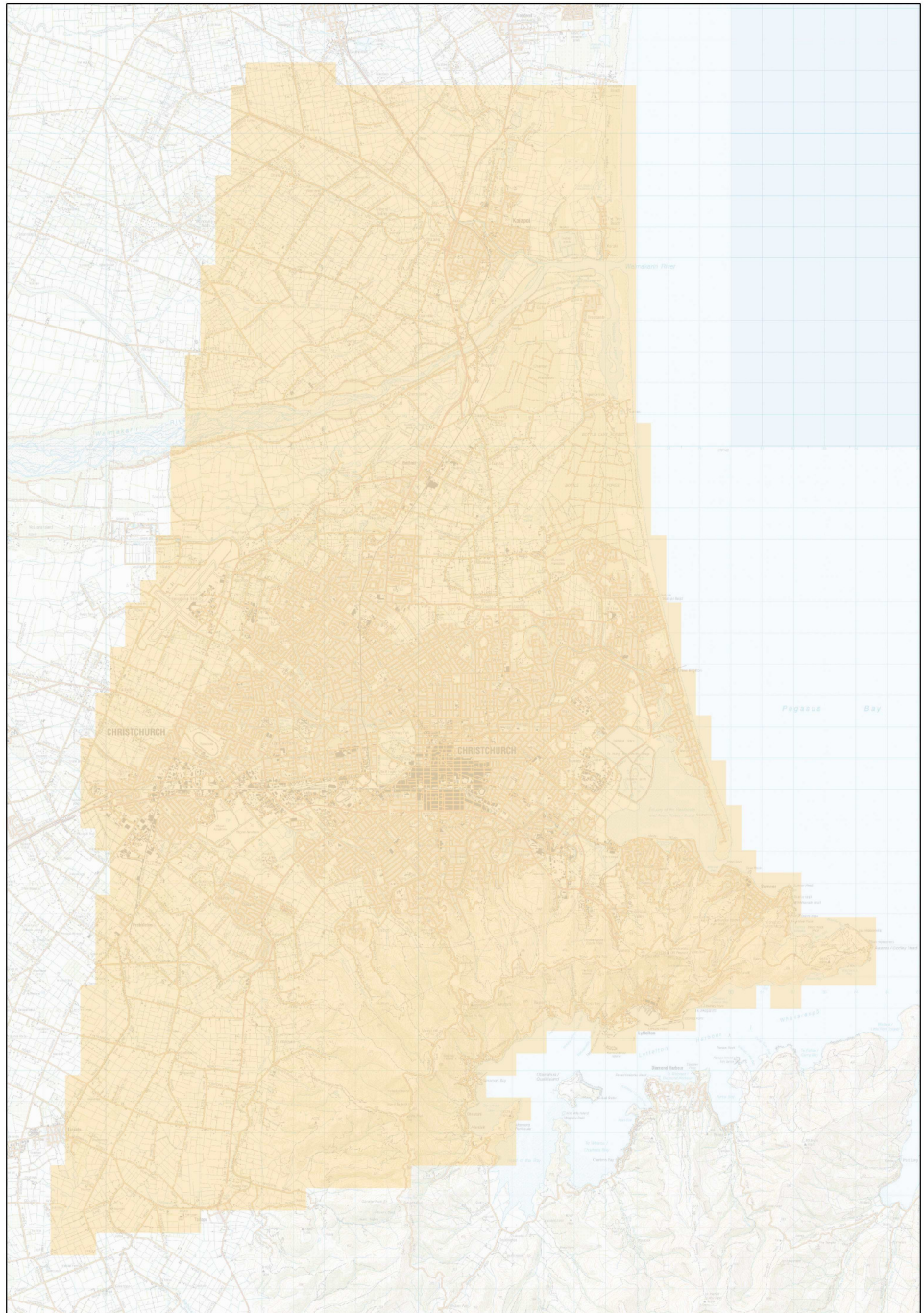| | |
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| **Date of Metadata Creation** | 2 March 2011 |
| **Author** | Tim Farrier |

# Appendix A:  Project Sub Area

**Orthophoto tiles - Akaroa**
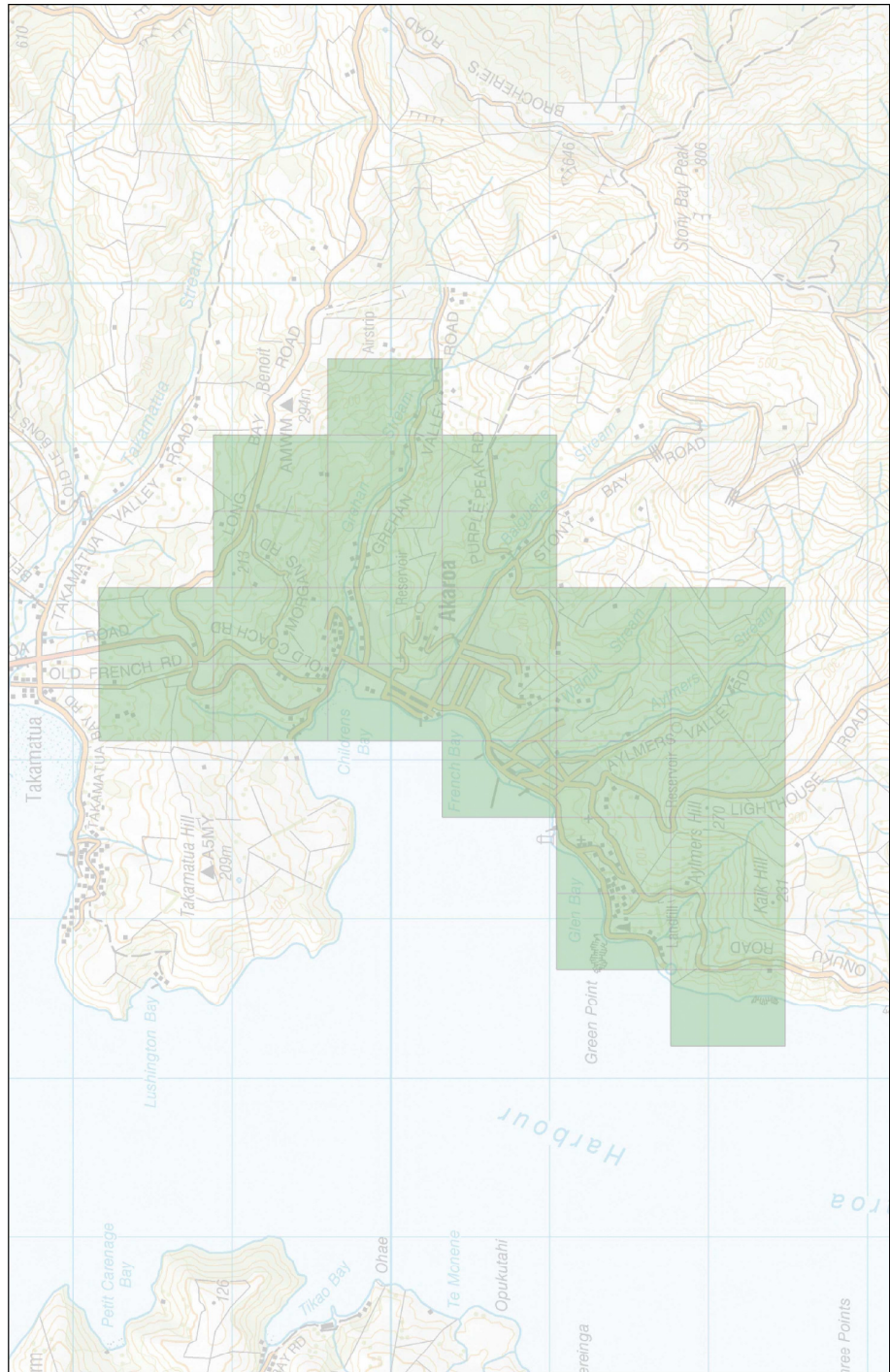


Legend

akaroa_1k_tiles

**Orthophoto tiles - Christchurch**



**Legend**

akaroa_1k_tiles