

Data Supply Metadata s1





Project	Christchurch 23 December 2011 Earthquake Response	11.141
Client	EQC c/o Tonkin and Taylor	
Client Contact	Sjoerd van Ballegooy	

Summary of Data	<p>Following the 23 December 2011 earthquake NZ Aerial Mapping (NZAM) collected aerial photography over areas of interest in the vicinity of Christchurch. The data has been processed into the set of orthophotos contained in this data supply. This supply contains the following products:</p> <ul style="list-style-type: none"> • Orthophotos • Project extent and orthophoto tile layout datasets <p>Please refer to the report sections <i>Data Processing</i> and <i>Data Supply</i> for details on them.</p>
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Data Acquisition	<p>The photography was collected flying at 1,600m above the ground using NZAM's Vexcel UCXp large format digital aerial camera. It was acquired during the afternoon of 24 December 2011. The afternoon was not a clear blue sky day and the odd patch of cloud and cloud shadow was photographed.</p> <p>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.</p>
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Data Processing	<p>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.</p> <p>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. GNS provided information that the LINZ geodetic reference mark MQZG and Geosystems iBASE reference mark WIGRAM had not moved significantly during the earthquake. NZAM used this knowledge to check the coordinate for the temporary survey mark that we established at Christchurch Airport.</p>
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<p>Data Processing continued</p>	<p>The orthophotos were produced using an edited version of DTM that NZAM created from the post June 2011 earthquake LiDAR dataset. Due to the changes that have taken place within the project area since the LiDAR acquisition it was necessary to undertake a comprehensive review of the DTM.</p> <p>Generally the most nadir portions of photos were used when generating mosaic seam-lines. This ensures that building lean in the orthophotos is minimised. If it was possible to eliminate areas of cloud from the orthophotos by used portions of photos beyond the most nadir then this was done.</p>
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<p>Data Supply</p>	<p>The supplied products are all in terms of NZTM and tiled in 1:1,000 NZTopo50 map tiles. All products are named with the naming convention NZTopo50PrimeXXYY, where XXYY are the tile identifies (e.g. BA320234).</p> <p>The data is in the following folder structure:</p> <ul style="list-style-type: none">  Layout  Orthophotos <ul style="list-style-type: none">  ECW  TIFF <p>The folder <i>Layout</i> contains the ESRI shape files of the project extents and orthophoto tile layout.</p> <p>The folder <i>Orthophotos</i> contains the 10cm GSD orthophotos. These are provided in uncompressed TIFF and ECW file formats. The ECW files have been compressed using a target compression ratio of 15.</p> <p>If you have requirements for the data in other file formats, map projections please contact NZAM. Our contact details are provided below.</p>
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<p>Quality Exceptions</p>	<p>While all endeavours were made to collect cloud and cloud shadow free photography, due to the requirement to expedite the photo acquisition the dataset contains a few patches of cloud and cloud shadow. Fortunately the cloud is not extensive and generally ground detail can still be observed through it.</p>
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Appendix A: Project Area and data tile layouts

Areas of interest shown as purple outline.

Christchurch
23 December
Earthquake
Response
Orthophotos

