

# Statistics New Zealand ANZLIC Metadata Template

## Identification

<b>Title</b>	Wards 2012																																
<b>Date</b>	1 November 2010 (publication)																																
<b>Language</b>	eng																																
<b>Character Set</b>	Uft8																																
<b>Abstract</b>	<p>This dataset is the definitive set of ward boundaries at 1 January 2012 as defined by the territorial authorities and/or Local Government Commission, but maintained by Statistics New Zealand (who are the custodian).</p> <p>Wards were originally set up within any territorial authority with a population of 20,000. Wards are defined under the local Electoral Act 2001 and result from the division, of the district of a territorial authority for electoral purposes. The ward system was designed to allow for the recognition of communities within a district and to increase community involvement in the local government system. Now, territorial authorities can choose whether they would like to maintain electoral wards. As a result, the number of wards has steadily decreased. Ward boundaries are reviewed in the year immediately preceding the triennial local government elections.</p> <table><tr><th>Year</th><th>Ward Totals</th></tr><tr><td>1989</td><td>409</td></tr><tr><td>1992</td><td>378</td></tr><tr><td>1995</td><td>364</td></tr><tr><td>1998</td><td>332</td></tr><tr><td>2001</td><td>328</td></tr><tr><td>2002</td><td>320</td></tr><tr><td>2003</td><td>320</td></tr><tr><td>2004</td><td>320</td></tr><tr><td>2005</td><td>286</td></tr><tr><td>2006 v1</td><td>286</td></tr><tr><td>2006 v2</td><td>284</td></tr><tr><td>2007</td><td>284</td></tr><tr><td>2008</td><td>275</td></tr><tr><td>2009</td><td>275</td></tr><tr><td>2010</td><td>275</td></tr></table>	Year	Ward Totals	1989	409	1992	378	1995	364	1998	332	2001	328	2002	320	2003	320	2004	320	2005	286	2006 v1	286	2006 v2	284	2007	284	2008	275	2009	275	2010	275
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	<table><tr><td>2011</td><td>248</td></tr><tr><td>2012</td><td>248</td></tr></table>	2011	248	2012	248																													
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	<p>Wards are numbered based on their corresponding territorial authority. Each ward has a unique five digit number. The first three digits represent the territorial authority that the ward lies within. The following two digits are sequential, and represent the number of wards within a territorial authority. For example, Westland District (051) has three wards. The numbers of these wards are 05101, 05102, and 05103.</p> <p>There are various territorial authorities that do not use wards. In the data, these territorial authorities use “99” at the end of the ward code, and the descriptor “Area Outside of Ward”. In 2012, the Territorial Authorities that do not use wards were:</p> <table><tr><th>TA Code</th><th>Territorial Authority Name</th><th>Ward Code</th></tr><tr><td>024</td><td>Rotorua District</td><td>02499</td></tr><tr><td>026</td><td>Kawerau District</td><td>02699</td></tr><tr><td>029</td><td>Wairoa District</td><td>02999</td></tr><tr><td>037</td><td>Whanganui District</td><td>03799</td></tr><tr><td>045</td><td>Upper Hutt City</td><td>04599</td></tr><tr><td>051</td><td>Tasman District</td><td>05199</td></tr><tr><td>052</td><td>Nelson City</td><td>05299</td></tr><tr><td>054</td><td>Kaikoura District</td><td>05499</td></tr><tr><td>067</td><td>Chatham Islands Territory</td><td>06799</td></tr><tr><td>075</td><td>Invercargill City</td><td>07599</td></tr></table> <p>Ward boundaries are defined at meshblock level. They are not able to be defined at areas unit level because the boundaries for ward to not align to area unit.</p> <p>As at 1<sup>st</sup> July 2007, Digital Boundary data became freely available.</p>	TA Code	Territorial Authority Name	Ward Code	024	Rotorua District	02499	026	Kawerau District	02699	029	Wairoa District	02999	037	Whanganui District	03799	045	Upper Hutt City	04599	051	Tasman District	05199	052	Nelson City	05299	054	Kaikoura District	05499	067	Chatham Islands Territory	06799	075	Invercargill City	07599
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054	Kaikoura District	05499																																
067	Chatham Islands Territory	06799																																
075	Invercargill City	07599																																
Topic category	Boundaries																																	
Spatial representation type	Vector																																	

## Extent

Description	Twelve mile New Zealand territorial limit
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## Geographic Box

West bound longitude	165.905646
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East bound longitude	179.855610
North bound latitude	-33.826584
South bound latitude	-47.841491

## Extent

TEMPORAL	
Description	Data represents meshblock polygon's dissolved since 1990
Begin date	1990-01-01
End date	Now (Year of 2012)
Access Constraints	
Use constraints	
Use limitation	
Maintenance and update frequency	The meshblock and associated hierarchies is maintained on a regular basis. An annual pattern is made available for each year up to 2012.
Date of next update	
Update scope	

## Point of Contact

Organisation name	Statistics New Zealand
Position name	GeoStatistical Analyst
Role	Point of Contact
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Linkage	<a href="http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx">http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx</a>

## Distribution Info

<b>Distribution format</b>	ESRI Shape MapInfo Tab
<b>Distribution version</b>	1.0
<b>Online resource linkage</b>	<a href="http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx">http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx</a>
<b>Online resource description</b>	Web page for downloading the digital boundaries which the meshblock is part of the bundle of boundaries/geographies StatsNZ makes available

## Reference system info

<b>Title</b>	New Zealand Transverse Mercator 2000 (NZTM2000)
<b>Date</b>	1 July 2001
<b>Edition</b>	
<b>Code</b>	19971

## Data quality info scope

<b>Hierarchy level</b>	Dataset
<b>Description</b>	New Zealand Meshblock Boundaries

## Lineage

<b>Statement</b> (general explanation of the data producer's knowledge about the lineage of a dataset)	<p>Ward Boundaries are based on the meshblock pattern. Ward boundaries are reviewed every three years, in the year immediately preceding the triennial local government elections. Requests for change can be received from Territorial Authorities and the Electoral Enrolment Centre. Once all changes are prepared, Statistics NZ then passes the requests for changes to the meshblock pattern onto LINZ for the electronic changes to take place.</p> <p>Non-alignment of meshblock and cadastral boundaries are one of a</p>
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	<p>number of reasons for meshblock boundary adjustments. Other reasons include requests from local authorities, Local Government Commission, Electoral Representation Commission and to make Census of Population and Dwellings enumeration processes easier.</p> <p>The digital meshblock boundaries, and other boundaries based on dissolved meshblocks, are stored and maintained by Land Information New Zealand within their Landonline database, an ArcInfo suite.</p> <p>To Derive the area unit boundaries clipped to the coastline, meshblock polygons were dissolved to include or exclude land/water attributes attached to each meshblock.</p> <p>From the meshblock pattern, higher geographies, including the 2011 ward boundary pattern were dissolved using the dissolve tool in the Arc GIS suite to create multiple output datasets.</p>
<b>Description</b> (detailed description of the level of the source data)	<p>The original points representing the meshblock boundary pattern were digitised in 1991 from 1:5,000 scale urban maps and 1:50,000 scale rural maps. The magnitude of error of the original digital points would have been in the range of +/- 10 metres in urban areas and +/- 25 metres in rural areas. Where meshblock boundaries coincide with cadastral boundaries the magnitude of error will be within the range of 1–5 metres in urban areas and 5 - 20 metres in rural areas. This being the estimated magnitude of error of Landonline.</p> <p>The creation of level 1 meshblock boundaries for 2012 digital pattern and the dissolving into other geographies/boundaries were outsourced to Sinclair Knight Merz (SKM) and were created by the following processes using ESRI software.</p> <ol style="list-style-type: none"> <li>1. Import data from the supply format of ESRI Shapefiles to an ESRI Geodatabase.</li> <li>2. Clip layers for the Area Unit, Territorial Authorities, Regional Council, Urban Areas, Wards and meshblock regions, creating two output datasets (“High definition boundaries”, and “High definition boundaries –clipped to the coastline”)</li> <li>3. Run Topology Checks on all data</li> <li>4. Run attribute checks</li> <li>5. Export supplied and created data to MapInfo format</li> <li>6. Quality Assurance of delivery files</li> <li>7. Dissolve the meshblocks layer into layers for area unit, territorial authority, regional council, urban area, ward and community board.</li> </ol> <p>Level 1 is exactly as exists in Landonline i.e. no points are removed and co-ordinates are retained at 1mm accuracy.</p> <p>The following quality checks were applied to the meshblock pattern:</p>

	<p><b>Translation of ESRI Shapefiles to ESRI geodatabase dataset</b></p> <p>The meshblock dataset was imported into the ESRI Geodatabase structure that is required to run the ESRI topology checks. Topology rules were set for each of the layers.</p> <p><b>Clipping of Layers to Coastline</b></p> <p>The supplied shapefiles were then clipped to the coastline. The coastline was defined as features within the supplied land_water12_region with codes and descriptions as follows:</p> <ul style="list-style-type: none"> <li><b>11- Island – Included</b></li> <li><b>12- Mainland – Included</b></li> <li><b>21- Inland Water – Included</b></li> <li><b>22- Inlet – Excluded</b></li> <li><b>23- Oceanic – Excluded</b></li> <li><b>31- Other – Included.</b></li> </ul> <p>The clip was completed using ArcGIS 10 and FME.</p> <p><i>Note- for the Chatham Islands, 22-Inlet was included as this gives a full clip of the data for the main island. An inlet feature covers much of the main island in the group.</i></p> <p><b>Topology Checks</b></p> <p>A tolerance of 0.1 cm was applied to the data, which meant that the topology engine validating the data saw any vertex closer than this distance as the same location. This is the smallest tolerance possible in this software and for this projection. A default topology rule of “Must Be Larger than Cluster Tolerance” is applied to all data – this would highlight where any tiny features with a width less than 0.1cm exist. No errors were found for this rule.</p> <p>Two topology rules were applied specifically within each of the layers in the ESRI geodatabase – namely “Must Not Overlap”, “Must Not Have Gaps”. These both check a layer upon itself.</p> <p><b>Must Not Overlap</b></p> <p>This process checks for any areas that overlap another feature from the same layer and produces an error where an overlap is found.</p> <p><b>Must Not have Gaps</b></p> <p>This process checks for any voids between or within features in the same layer and produces an error if found.</p> <p><b>Topology Checks Results:</b></p> <p>There were no real errors in either the gap or overlap checks for the mb11_region layer supplied, and none for any of the created datasets. For the gaps test, the most outer polygons are always reported as an error, and this was the only error reported for all cases.</p> <p><b>Scripted Process - Spatial overlay correct</b></p> <p>A script was created going through the following process: each of the dissolved layers was cycled through, taking each polygon feature and checking that the meshblock features with the same code have the exact same overall spatial boundary. No errors were found.</p> <p><b>Export to MapInfo Format</b></p> <p>The data was supplied to SKM in ESRI Shapefile – these were exported to MapInfo format using FME for delivery to Stats NZ. The original data was supplied in NZTM coordinates, and so no projection of data was required.</p>
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	<p><b>QA of Delivery Files</b></p> <p>The ESRI delivery files were viewed in both delivery formats (ESRI and MapInfo) and had spot checks on data consistency and attributes performed. All data was then written to DVD and checked for readability.</p> <p>Statistics NZ is progressively realigning meshblock boundaries to cadastral boundaries and therefore the quality of the meshblock pattern has improved since 1991 when originally digitised. However, the accuracy of the digital meshblock pattern is dependent on the quality of the underlying survey information.</p> <p><b>Dissolve meshblocks to higher levels</b></p> <p>Statistics New Zealand then dissolved the ESRI meshblock shapefile to the higher levels, for both the full and clipped dataset. The dissolve tool was used to generate these datasets from the full meshblock dataset and the clipped to the coastline meshblock dataset.</p>
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## Metadata

<b>File identifier</b>	
<b>Language</b>	eng
<b>Character set</b>	Utf8
<b>Hierarchy level</b>	dataset
<b>Hierarchy level name</b>	Dataset – meshblocks -2012
<b>Date stamp</b>	2012-01-01
<b>Metadata standard name</b>	ANZLIC Metadata Profile
<b>Metadata standard version</b>	1.1

## Metadata author

<b>Individual name</b>	Geospatial Team
<b>Organisation name</b>	Statistics New Zealand
<b>Position name</b>	GeoStatistical Analyst
<b>Role</b>	Point of Contact
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<b>Linkage</b>	<a href="http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx">http://www.stats.govt.nz/browse_for_stats/people_and_communities/geographic-areas/download-digital-boundaries.aspx</a>