# Statistics New Zealand ANZLIC Metadata Template

## Identification

| Title                  | Community Boards 2012   |
|------------------------|---|
| Date                   | 1 November 2010 (publication)   |
| Language               | eng   |
| Character Set          | Uft8  |
| Abstract               | This dataset is the definitive set of Community Board boundaries for 2011 as defined by the territorial authorities and Local Government Commission but maintained by Statistics New Zealand, who are the custodian.  Community Boards are set up under the Local Government Act 2002 and Local Electoral Act 2001. Their purpose is to administer the affairs of communities with populations not less than 1,500 within rural, urban or metropolitan districts of a territorial authority. A community boards functions, powers and duties are delegated at the discretion of its parent territorial authority and these may differ from community board to community board. Community boards and their boundaries are reviewed in the year immediately preceding the triennial local government elections. |
|                        | Community Boards are numbered based on their corresponding territorial authority. Each community board has a unique five digit number. The first three digits are the territorial authority that the community board lies within. The following two digits are sequential, and represent the number of community boards within the territorial authority. For example, Taupo District (021) has 1 community board numbered 02101. The rest of the district is not represented by a community board boundary and is therefore coded 02199.  Many territorial authorities do not have community boards and if they do, the community boards do not necessarily cover the whole territorial authority.   |
|                        | As at 1 <sup>st</sup> July 2007, Digital Boundary data became freely available.   |
| Topic category         | boundaries  |
| Spatial representation | vector  |

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|------------|--|
| TVDO       |  |
| type       |  |
| -,,,,-     |  |
|            |  |

## Extent

| Description | Twelve mile New Zealand territorial limit |
|-------------|---|
|             |   |

# Geographic Box

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

## Extent

| TEMPORAL               |   |
|------------------------|---|
| Description            | Data represents area unit polygons dissolved since 1991   |
| Begin date             | 1991-01-01  |
| End date               | Now (Year of 2012)  |
| Access Constraints     | None. Data is freely downloadable from the Statistics NZ website.   |
| Use constraints        | These conditions of supply apply to all users of Statistics New Zealand digital boundaries effective 1 July 2007.  Permitted uses   |
|                        | Statistics New Zealand must be acknowledged as the source of the boundaries.  Uses not permitted  |
|                        | Users are not permitted to change the accuracy of the boundaries and supply them to another party.  |
|                        | Liability While care has been used in compiling these boundary coordinates, Statistics New Zealand gives no warranty that the data supplied is free from error. Statistics New Zealand shall not be liable for any loss suffered through the use, directly or indirectly, of any information, product or service. |
| Use limitation         |   |
| Maintenance and update | The meshblock pattern and associated hierarchies is maintained on a   |
| frequency              | regular basis.  |
|                        | An annual pattern is made available for each year up to 2012.   |
| Date of next update    | December 2012   |
| Update scope           | Dataset   |

## **Point of Contact**

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| Linkage                 | http://www.stats.govt.nz/browse for stats/people and communities/geographic-areas/download-digital-boundaries.aspx |

## **Distribution Info**

| Distribution format         | ESRI Shape   |
|-----------------------------|--|
|                             | MapInfo Tab  |
| Distribution version        | 1.0  |
| Online resource linkage     | http://www.stats.govt.nz/browse for stats/people and communities /geographic-areas/download-digital-boundaries.aspx                      |
| Online resource description | Web page for downloading the digital boundaries which area units is part of the bundle of boundaries/geographies StatsNZ makes available |

# Reference system info

| Title   | New Zealand Transverse Mercator 2000 (NZTM2000) |
|---------|---|
| Date    | 1 July 2001                                     |
| Edition |   |
| Code    | 19971   |

## Data quality info scope

| Hierarchy level | Dataset                          |
|-----------------|----------------------------------|
| Description     | New Zealand Area Unit Boundaries |

## Lineage

#### Statement

(general explanation of the data producer's knowledge about the lineage of a dataset) Community Boards are based on the meshblock pattern. 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.

For a change to community board boundaries to occur outside a review period, a special consideration must be granted by Statistics New Zealand.

Non-alignment of meshblock and cadastral boundaries are one of a 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.

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.

From the meshblock pattern, higher geographies, including the 2012 Community boards pattern were dissolved using the dissolve tool in the Arc GIS suite to create multiple output datasets.

#### Description

(detailed description of the level of the source data)

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.

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.

- 1. Import data from the supply format of ESRI Shapefiles to an ESRI Geodatabase.
- 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")
- 3. Run Topology Checks on all data
- 4. Run attribute checks
- 5. Export supplied and created data to MapInfo format
- 6. Quality Assurance of delivery files
- 7. Dissolve the meshblocks layer into layers for area unit, territorial authority, regional council, urban area, ward and community board.

Level 1 is exactly as exists in Landonline i.e. no points are removed and co-ordinates are retained at 1mm accuracy.

The following quality checks were applied to the meshblock pattern:

#### Translation of ESRI Shapefiles to ESRI geodatabase dataset

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.

#### **Clipping of Layers to Coastline**

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:

- **11** Island *Included*
- 12-Mainland Included
- 21- Inland Water Included
- **22-** Inlet Excluded
- 23- Oceanic Excluded
- 33- Other Included.

The clip was completed using ArcGIS 10 and FME.

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.

#### **Topology Checks**

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.

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.

#### **Must Not Overlap**

This process checks for any areas that overlap another feature from the

same layer and produces an error where an overlap is found.

#### **Must Not have Gaps**

This process checks for any voids between or within features in the same layer and produces an error if found.

#### **Topology Checks Results:**

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.

#### **Scripted Process - Spatial overlay correct**

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.

#### **Export to MapInfo Format**

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.

#### **QA of Delivery Files**

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.

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.

#### Dissolve meshblocks to higher levels

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.

### Metadata

| File identifier      |                            |
|----------------------|----------------------------|
| Language             | eng                        |
| Character set        | Utf8                       |
| Hierarchy level      | dataset                    |
| Hierarchy level name | Dataset – meshblocks -2012 |

| Date stamp             | 2012-01-01              |
|------------------------|-------------------------|
|                        |                         |
| Metadata standard name | ANZLIC Metadata Profile |
|                        |                         |
| Metadata standard      | 1.1                     |
| version                |                         |

## Metadata author

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|-------------------------|--|
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| Linkage                 | http://www.stats.govt.nz/browse_for_stats/people_and_communities<br>/geographic-areas/download-digital-boundaries.aspx |