

Metadata

Language

Language Code

eng

Character Set

Character Set Code

utf8

Hierarchy Level

Scope Code

dataset

Hierarchy Level Name

dataset

Contact

Responsible Party

Individual Name

Geospatial Team

Organisation Name

Statistics New Zealand

Position Name

Geospatial Analyst

Contact Info

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Online Resource

Online Resource

Linkage

URL

[http://www.stats.govt.nz/browse\\_for\\_stats/people\\_and\\_communities/Geographic-areas/digital-boundary-files.aspx](http://www.stats.govt.nz/browse_for_stats/people_and_communities/Geographic-areas/digital-boundary-files.aspx)

Role

Role Code

pointOfContact

## Date Stamp

### Date

2022-02-23

## Metadata Standard Name

ISO 19139 Geographic Information - Metadata - Implementation Specification

## Metadata Standard Version

2007

## Spatial Representation Info

### Vector Spatial Representation

#### Topology Level Code

geometryOnly

#### Geometric Object Type Code

composite

#### Integer

46643

## Reference System Info

### Reference System

#### Reference System Identifier

##### Identifier

###### Code

2193

##### Code Space

EPSG

##### Version

7.9.4(9.0.0)

## Identification Info

### Data Identification

#### Citation

##### Citation

###### Title

MB2014\_V1\_00

##### Date

##### Presentation Form

###### Presentation Form Code

mapDigital

### Abstract

MB2014\_V1\_00 is the generalised meshblock pattern for 2014as defined by Statistics New Zealand as at 1 January 2014. Statistics New Zealand maintains an annual meshblock pattern for collecting and producing statistical data. This allows data to be compared over time. A meshblock is the smallest geographic unit for which statistical data is collected and processed by Statistics New Zealand. A meshblock is defined by a geographic area, which can vary in size from part of a city block to a large area of rural land. Each meshblock borders on another to form a network covering all of New Zealand, including coasts and inlets and extending out to the 200-mile economic zone. Meshblocks are added together to build up larger geographic areas such as area units and urban areas. They are also used to define electoral districts, territorial authorities, and regional councils. There are two ways of amending meshblock boundaries. Splitting is subdividing a meshblock into two or more meshblocks. Nudging is shifting a boundary to a more appropriate position. Reasons for splits and nudges include: to accommodate changes to local government boundaries, which are required by the Local Government Act 2002 to follow meshblocks for electoral purposes to accommodate changes to parliamentary electoral boundaries, following each Electoral Representation Commission review after each five-yearly Census of Population and Dwellingsto make changes to statistical boundaries such as area units and urban areasto enable changes to census collection districts to improve the size balance of meshblocks in areas where there has been population growthto separate land and water –eg mainland, islands, inlets, and oceanic are defined separately to accommodate requests from other users of the meshblock pattern eg the NZ Police for their station, area, and district boundaries. Meshblock numbering process until 2014 (MB 2014) Meshblocks were allocated a unique seven-digit number. The first five digits were unique, and referred to the original 1976 meshblock code. The two end numbers refer to sequential meshblock splits to the original meshblock. When a meshblock is split the final two digits of the original meshblock number are changed. Exceptions to this rule are a small number of meshblocks where no more numbers in the sequence are available. Accordingly there were some meshblocks in Auckland and Tauranga City starting with 32xxxx. Statistics New Zealand maintains a concordance file to ensure that boundaries relating to earlier meshblock patterns can also be produced. The digital geographic boundaries are defined by Statistics New Zealand. They are maintained on behalf of Statistics New Zealand by Land Information New Zealand in Landonline using ArcInfo. Meshblocks cover the land area of New Zealand, the water area to the 12-mile limit, the Chatham Islands, Kermadec Islands, sub-Antarctic islands, off-shore oil rigs, and Ross Dependency.

The following 16 meshblocks are not held in digitised form. MeshblockLocation (area unit name)0016901Oceanic-Kermadec Islands0016902Kermadec Islands1588000Oil Rig-Taranaki3166401Oceanic-Campbell Island3166402Campbell Island3166600Oil Rig-Southland3166710Oceanic-Auckland Islands3166711Auckland Islands3195000Ross Dependency3196001200 Mile Economic Zone3196002Oceanic-Bounty Islands3196003Bounty Islands3196004Oceanic-Snares Islands3196005Snares Islands3196006Oceanic-Antipodes Islands3196007Antipodes Islands Meshblock boundaries generally follow road centre-lines, cadastral property boundaries or topographical features (eg rivers). Expanses of water in the form of lakes and inlets are defined separately from land. The annual pattern of digital boundaries is used for the full calendar year from 1 January. YearMeshblock Total of NZDigitised Meshblock Total19903488234876199135152 (Census)3514619923516335157199335370353641994355843557819953623536228199636808 (Census)3680119973680836801199836829368221999371543714720003738337367200138366 (Census)3835020023837838362200338685386692004393133929720053981939803200641392 (Census)41376200741512414962008429824296620094394043924201046252462362011466274661120124663246616201346637 (Census)4662120144664346627As at 1stJuly 2007, Digital Geographic Boundary data became freely available.

#### Purpose

MB2014\_V1\_00 is the definitive set of meshblock boundaries for 2014. This version contains 46,643 meshblocks in this file.

#### Point Of Contact

##### Responsible Party

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###### Organisation Name

Statistics New Zealand

###### Position Name

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###### Role

###### Role Code

pointOfContact

#### Descriptive Keywords

##### Keywords

###### Keyword

Meshblocks

###### Keyword

mb

Keyword  
meshblocks

Keyword  
MB

Descriptive Keywords

Keywords  
Keyword  
Downloadable Data

Resource Constraints

Constraints  
Use Limitation  
These conditions of supply apply to all users of Statistics NZ digital boundaries effective 1 July 2007. Permitted uses You must acknowledge Statistics NZ as the source of the boundaries. Uses not permitted You must not change the accuracy of the boundaries and supply them to another party. Liability While care has been taken to compile these boundary coordinates, Statistics NZ gives no warranty that the data supplied is free from error. Statistics NZ will not be liable for any loss suffered by the use, directly or indirectly, of this information.

Spatial Representation Type Code

vector

Language

Language Code  
eng

Character Set

Character Set Code  
utf8

Topic Category Code

boundaries

Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.1.14362

Extent

EX\_Extent  
Geographic Element  
EX\_Geographic Bounding Box  
Extent Type Code  
Boolean  
true  
-180180-47.841491-33.559984

Extent

EX\_Extent  
Description  
Data represents meshblock polygons digitised since 1991  
Geographic Element  
EX\_Geographic Bounding Box  
Extent Type Code  
Boolean  
true  
-180180-47.841491-33.559984

Extent

EX\_Extent  
Geographic Element  
EX\_Geographic Bounding Box  
Extent Type Code  
Boolean  
true  
-180180-47.841491-33.559984

Distribution Info

Distribution  
Distribution Format  
Format  
Name

## File Geodatabase Feature Class

### Version

1.0

### Data Quality Info

#### DQ \_ Data Quality

##### Scope

#### DQ \_ Scope

##### Level

#### Scope Code

dataset

### Lineage

#### LI \_ Lineage

##### Statement

The digital meshblock boundaries are stored and maintained by Land Information New Zealand within their Landonline database, and ArcInfo Suite. Statistics New Zealand maintains the meshblock pattern by checking the cadastral pattern against the meshblock pattern via LINZ's Landonline and Terralink International Limited's licensed software, Terraview platinum. 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. 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. From the generalised meshblock pattern, higher geographies were dissolved using the dissolve tool in the Arc GIS suite to create multiple output datasets.

### Source

#### LI \_ Source

##### Description

Deriving output files The original vertices delineating 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 high definition and generalised meshblock boundaries for the 2013 digital pattern and the dissolving of these meshblocks into other geographies/boundaries were completed within Statistics New Zealand using ESRI's ArcGIS desktop suite and the Data Interoperability extension with the following process: 1. Import data and all attribute fields into an ESRI File Geodatabase from LINZ as a shapefile 2. Run geometry checks and repairs. 3. Run Topology Checks on all data (Must Not Have Gaps, Must Not Overlap), detailed below. 4. Generalise the meshblock layers to a 1m tolerance to create generalised dataset. 5. Clip the high definition and generalised meshblock layers to the coastline using land water codes. 6. Dissolve all four meshblock datasets (clipped and unclipped, for both generalised and high definition versions) to higher geographies to create the following output data layers: Area Unit, Territorial Authorities, Regional Council, Urban Areas, Community Boards, Territorial Authority Subdivisions, Wards, Constituencies and Maori Constituencies for the four datasets. 7. Complete a frequency analysis to determine that each code only has a single record. 8. Re-run topology checks for overlaps and gaps. 9. Export all created datasets into MapInfo and Shapefile format using the Data Interoperability extension to create 4 output formats for each file. 10. Quality Assurance and rechecking of delivery files. The High Definition version is similar to how the layer exists in Landonline with a couple of changes to fix topology errors identified in topology checking. The following quality checks and steps were applied to the meshblock pattern: Translation of ESRI Shapefiles to ESRI geodatabase dataset The meshblock dataset was imported into the ESRI File Geodatabase format, required to run the ESRI topology checks. Topology rules were set for each of the layers. 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. A default topology rule of "Must Be Larger than Cluster Tolerance" is applied to all data - this would highlight where any features with a width less than 0.1cm exist. No errors were found for this rule. Three additional topology rules were applied specifically within each of the layers in the ESRI geodatabase - namely "Must Not Overlap", "Must Not Have Gaps" and "Area Boundary Must Be Covered By Boundary Of (Meshblock)". These check that a layer forms a continuous coverage over a surface, that any given point on that surface is only assigned to a single category, and that the dissolved boundaries are identical to the parent meshblock boundaries. Topology Checks Results: There were no errors in either the gap or overlap checks. Generalising To create the generalised Meshblock layer the "Simplify Polygon" geoprocessing tool was used in ArcGIS, with the following parameters: Simplification Algorithm: POINT\_REMOVE Maximum Allowable Offset: 1 metre Minimum Area: 1 square metre Handling Topological Errors: RESOLVE\_ERRORS Clipping of Layers to Coastline The processed feature class was then clipped to the coastline. The coastline was defined as features within the supplied Land2013 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. Features were clipped using the Data Interoperability extension, attribute filter tool. The attribute filter was used on both the generalised and high definition meshblock datasets creating four meshblock layers. Each meshblock dataset also contained all higher geographies and land-water data as attributes. Note: Meshblock 0017001 which is classified as island, was excluded from the clipped meshblock layers, as most of this meshblock is oceanic. Dissolve meshblocks to higher geographies Statistics New Zealand then dissolved the ESRI meshblock feature classes to the higher geographies, for both the full and clipped dataset, generalised and high definition datasets. To

dissolve the higher geographies, a model was built using the dissolver, aggregator and sorter tools, with each output set to include geography code and names within the Data Interoperability extension. Export to MapInfo Format and Shapefiles The data was exported to MapInfo and Shapefile format using ESRI's Data Interoperability extension Translation tool. Quality Assurance and rechecking of delivery files The feature counts of all files were checked to ensure all layers had the correct number of features. This included checking that all multipart features had translated correctly in the new file.