Statistics New Zealand ANZLIC Metadata Template

Identification

Title	Urban Areas 2013 version 2.0
Date	20 November 2013 (publication)
Language	eng
Character Set	Uft8
Abstract	This dataset is the definitive set of urban area boundaries for 2013 as defined by Statistics New Zealand. Urban areas are statistically defied areas with no administrative or legal basis. Urban area populations are defined internationally as towns with 1000 people or more. The urban area classification is designed to identify concentrated urban or semi-urban settlements without the distortions of administrative boundaries. Urban areas are made up of complete meshblocks and area units. Prior to 1992 only the main and secondary urban areas had unique 2 digit codes. In the 1992 pattern the structure of the urban areas was changed to 3 digits, with unique codes for Minor Urban Areas as well as Main and Secondary Urban Areas There is a three part hierarchal sub-division of urban areas into: -Main Urban Areas -Secondary Urban Areas -Minor Urban Areas Main urban areas are very large urban areas centred on a city or major urban centre. Main urban areas have a minimum population of 30, 000 and are identified by codes between 001 and 100 such as 020, Wellington. In the 2013 version 2.0 dataset, there are 26 main urban areas. Secondary urban areas were established at the 1981 Census of Population and Dwellings. They have a population between 10,000 and 29,999 and are centred on the large regional centres. Codes for secondary urban areas range between 101 and 200. In the 2013 version 2.0 dataset, there are 17 secondary urban areas. The remainder of the statistically defined urbanised population of New

	Zealand are in minor urban areas. Minor urban areas are urbanised settlements (outside main and secondary urban areas), centred around smaller towns with a population between 1,000 and 9,999. Codes for minor urban areas range between 201 and 500. Rural centres are also defined in the urban area field. Rural centres were established during the 1989 Review of Geostatistical Boundaries. Rural centres have no administrative or legal status, but are statistical units deified by complete area units. They have a population between 300 and 999. These are not termed urban under the standard international definition but identifying these settlements enables users to distinguish between rural dwellers living in true rural areas and those living in rural settlements or townships. The code for rural centres is 501. As at 1st July 2007, Digital Boundary data became freely available.
Topic category	boundaries
Spatial representation type	vector

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 urban area polygons dissolved from meshblocks since 1991
Begin date	1991-01-01
End date	2013-01-01
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 taken to compile 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 frequency	The meshblock pattern and associated hierarchies are maintained on a regular basis. An annual pattern is made available for each year up to 2013.
Date of next update	December 2013
Update scope	Dataset

Point of Contact

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Linkage	http://www.stats.govt.nz/browse_for_stats/people_and_communities/Geographic-areas/digital-boundary-files.aspx

Distribution Info

Distribution format	ESRI Geodatabase ESRI Shapefile MapInfo Tab

Distribution version	1.0
Online resource linkage	http://www.stats.govt.nz/browse_for_stats/people_and_communities/Geographic-areas/digital-boundary-files.aspx
Online resource description	Web page for downloading the digital boundaries which urban area is part of the bundle of boundaries/geographies Stats NZ makes available.

Reference system info

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

Data quality info scope

Hierarchy level	Dataset
Description	New Zealand Urban Area Boundaries

Lineage

Statement (general explanation of the data producer's knowledge about the lineage of a dataset)	Non-alignment of meshblock and cadastral boundaries is one of a number of reasons for meshblock boundary adjustments. Other reasons include requests from local authorities, the Local Government Commission or Electoral Representation Commission, and to make Census of Population and Dwellings enumeration processes easier. To derive the urban area boundaries clipped to the coastline, meshblock polygons were dissolved to exclude meshblocks with a land/water attribute of Inlet or Oceanic. From the meshblock pattern, higher geographies, including the 2013 Urban Areas 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)	**Deriving of 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* **31**- 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 datasets in both generalised and high definition formats. 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.

Metadata

File identifier	
Language	eng
Character set	Utf8
Hierarchy level	dataset
Hierarchy level name	Dataset – Urban Area -2013
Date stamp	2013-01-01
Metadata standard name	ANZLIC Metadata Profile
Metadata standard version	1.1

Metadata author

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