



**Manaaki Whenua**  
Landcare Research

## LCDB v4.0 (Deprecated)

### Title

LCDB40

### Creator

Landcare Research

### Date

2014-06-30

### Description

The New Zealand Land Cover Database (LCDB) is a multi-temporal digital thematic map of land cover and land use. Land cover at each of four periods; summer 1996/97, summer 2001/02, summer 2008/09, and summer 2012/13, is both delineated and classified. The land cover classification evolved over the first three periods but compatibility has been maintained. The current version, LCDB v4 (and its predecessor LCDB v3), contains 33 classes. The classification used in LCDB v3 and v4 can be found in the document LCDB-3CorrelationTable.pdf along with the correlation from the classification used in the earlier version (LCDB v2). This document is available as an attachment to this dataset in the LRIS portal (<https://iris.scinfo.org.nz/>), and on the LCDB project site ([www.lcdb.scinfo.org.nz](http://www.lcdb.scinfo.org.nz)). The LCDB was designed to be compatible in scale and accuracy with Land Information New Zealand's 1:50,000 topographic database. The LCDB is intended for use in areas such as state of environmental monitoring, forest and shrub inventory, biodiversity assessment, trend analysis and infrastructure planning. LCDB v4.0 was released in June 2014 and includes non-temporal edits to the 1996/97, 2001/02, and 2008/09 time periods along with new mapping of change up to the summer 2012/13 period. A change layer, "LCDB v4.0 change" is available to indicate both non-temporal and temporal changes made between LCDB v3.3 and LVCDDB v4.0. The non-temporal changes include error in earlier mapping. An "authority" attribute is also available in this layer acknowledging the source of the latest mapping of both non-temporal and temporal change. The Chatham Islands, which were available as part of LCDB-2 on a different map projection, have not yet been re-mapped in LCDB v3.0, v3.3, or v4.0. The data is referenced to the New Zealand Transverse Mercator 2000 projection (NZTM2000) which uses the NZ Geodetic Datum 2000 (NZGD2000). Errors in the data due to misclassification (not changes since mapping) or poor delineation can be reported to Landcare Research for inclusion in the next release using the online feedback mechanisms in <https://iris.scinfo.org.nz/>.

### Source

LCDB v4.0 is an update and improvement of previous LCDB maps (v3.3, v3.0 and earlier versions) and primarily references SPOT 5 satellite imagery acquired between November 2011 and February 2013. It adds a new time period (summer 2012/13), while at the same time correcting errors noticed for earlier time periods and refining unsatisfactory line-work representations. Specific mapping activities included:

- Incorporation of improved wetland mapping from six regional councils
- Mapping of detected change between 2008/09 and 2012/13 including that associated with harvesting/replanting of production forests
- Correction of error (in classification or delineation) noticed in the vicinity of edits undertaken above and

those notified by users • Incorporation of new urban development not detected by the change analysis above but recorded in the LINZ core record system (cadastral) database LCDB v3.3 is an improvement of LCDB v3.0 and earlier versions and focusses on correcting errors noticed in LCDB v3.0. Specific mapping activities included: • A review of improbable land cover transitions, correcting those found in error • A review of >20ha mapped land cover transitions between 2001/02 and 2008/09, correcting those found in error (some of these records were exposed as original error rather than recent-date change) • A review of South Island tussock and low producing grasslands to delineate those which have undergone recent improvement (commonly, but not always, associated with dairy conversion) • Correction of error (in classification or delineation) noticed in the vicinity of edits undertaken above and those notified by users LCDB v3.0 is an update and improvement of LCDB v2 and primarily references SPOT 5 satellite imagery acquired between November 2006 and February 2009. It adds a new time period (summer 2008/09), while at the same time correcting errors noticed for earlier time periods and refining unsatisfactory line-work representations. Specific mapping activities were confined to: • Mapping of detected change between 2001/02 and 2008/09 including that associated with harvesting/replanting of production forests • Limited correction of error (in classification or delineation) noticed in the vicinity of edits undertaken above The pre-processing and mapping technique for LCDB v3 and LCDB v4 was similar. Satellite imagery was pan-sharpened to 10m spatial resolution with terrain normalisation. Images were ortho-rectified to New Zealand Map Grid (for LCDB v3) and New Zealand Transverse Mercator Projection (for LCDB v4) using photogrammetric software. Ground control points, used to position the imagery in the rectification process, were measured from aerial photography. Elevation models, used to correct distortion due to altitude, have 15m pixels and were generated from 20m contour data. Ortho-rectification met the target of 95% of the imagery being accurate within 5 metres r.m.s. error. Mapping was informed by an automated comparative analysis of new imagery and earlier imagery to identify change and other inconsistencies and analysis of information from other datasets provided by MfE, LINZ, Regional Councils, and Territorial Authorities. Operators then used visual interpretation and manual digitising techniques to re-map in the vicinity of identified targets. In addition to SPOT data, imagery from other dates before and after was viewed simultaneously to help make decisions on the correct class and what is likely happening on the ground. Higher resolution SPOT Maps data from 2009/10, and aerial photography compiled by Terralink were included in this image set.

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#### Coverage

-47.421639 166.262038 -34.008229 179.501385

#### Identifier

<https://iris.scinfo.org.nz/layer/48412/>

#### Type

vector

#### Subject

New Zealand

#### Subject

Built-up Area (settlement)

#### Subject

Urban Parkland/Open Space

#### Subject

| Surface Mines and Dumps  
Subject  
| Transport Infrastructure  
Subject  
| Sand and Gravel  
Subject  
| Gravel and Rock  
Subject  
| Landslide  
Subject  
| Permanent Snow and Ice  
Subject  
| Alpine Grass/Herbfield  
Subject  
| Lake or Pond  
Subject  
| River  
Subject  
| Estuarine Open Water  
Subject  
| Short-rotation Cropland  
Subject  
| Orchard Vineyard & Other Perennial Crops  
Subject  
| High Producing Exotic Grassland  
Subject  
| Low Producing Grassland  
Subject  
| Tall Tussock Grassland  
Subject  
| Depleted Grassland  
Subject  
| Herbaceous Freshwater Vegetation  
Subject  
| Herbaceous Saline Vegetation  
Subject  
| Flaxland  
Subject  
| Fernland  
Subject  
| Gorse and/or Broom  
Subject  
| Manuka and/or Kanuka  
Subject  
| Matagouri or Grey Scrub  
Subject  
| Broadleaved Indigenous Hardwoods  
Subject

| Sub Alpine Shrubland  
Subject  
| Mixed Exotic Shrubland  
Subject  
| Exotic Forest  
Subject  
| Forest - Harvested  
Subject  
| Deciduous Hardwoods  
Subject  
| Indigenous Forest  
Subject  
| Mangrove  
Subject  
| 1996, 2001, 2008, 2012  
Subject  
| Vegetation cover, Land cover, Wetlands, Land use, Agriculture, Forests, Environmental data  
Subject  
| Downloadable Data  
Subject  
| farming  
Subject  
| biota  
Subject  
| environment  
Subject  
| inlandWaters