

# ISO Geodetic Registry

|                           |  |  |
|---------------------------|--|--|
| <i>Item class</i>         | Transformation   |  |
| <i>Name</i>               | <b>ITRF96 to NZGD2000 [LINZ v20171201]</b>   |  |
| <i>Item status</i>        | VALID  |  |
| <i>Identifier</i>         | 505  |  |
| <i>Information source</i> | <i>Title</i>   | Standard for New Zealand Geodetic Datum 2000 |
|                           | <i>Author</i>  | Office of the Surveyor General               |
|                           | <i>Publisher</i>   | Land Information New Zealand                 |
|                           | <i>Publication date</i>  | 2007-11-16                                   |
|                           | <i>Edition date</i>  |  |
| <i>Information source</i> | <i>Issue identification</i>  | LINZS25000                                   |
|                           | <i>Title</i>   | NZGD2000 Deformation Model                   |
|                           | <i>Author</i>  | Land Information New Zealand                 |
|                           | <i>Publisher</i>   | Land Information New Zealand                 |
|                           | <i>Revision date</i>   | 2018-01-15                                   |
| <i>Information source</i> | <i>Title</i>   | Transforming between ITRF and NZGD2000       |
|                           | <i>Author</i>  | Land Information New Zealand                 |
|                           | <i>Publisher</i>   | Land Information New Zealand                 |
|                           | <i>Publication date</i>  | 2017-05-09                                   |
| <i>Data source</i>        | ISO Geodetic Registry  |  |
| <i>Remarks</i>            | <p>Uses LINZ NZGD2000 deformation model. The deformation model transforms an ITRF96 coordinate at a specified epoch to NZGD2000. NZGD2000 is equivalent to ITRF96 epoch 2000 in areas unaffected by earthquakes and other localised deformation. The files required for this version of the transformation are contained within the most recent published version of the deformation model, if a more recent version than this one exists. The nominal operation accuracy is 0.02m horizontally and vertically, which represents the expected consistency of NZGD2000 coordinates calculated at different epochs, in the absence of significant local deformation.</p> |  |
| <i>Operation version</i>  | LINZ v20171201   |  |
| <i>Scope</i>              | Spatial referencing  |  |
| <i>Operation accuracy</i> | 0.02 m   |  |
| <i>Source CRS</i>         | ITRF96 - LatLonEHt   |  |
| <i>Target CRS</i>         | NZGD2000 - LatLonEHt   |  |
| <i>Operation method</i>   | NZGD2000 Deformation Model   |  |

## Extent

|                                |   |        |
|--------------------------------|---|--------|
| <i>Description</i>             | <b>New Zealand - onshore and offshore - Antipodes Islands, Auckland Islands, Bounty Islands, Campbell Island Chatham Islands, Kermadec Islands, North Island, Raoul Island, Snares Islands, South Island, Stewart Island.</b> |        |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i>   | 160.0  |
|                                | <i>North-bound latitude</i>   | -25.0  |
|                                | <i>East-bound longitude</i>   | -170.0 |
|                                | <i>South-bound latitude</i>   | -60.0  |

## Operation parameter values

|   |  |
|---|--|
| <i>NZGD2000 deformation model files</i> | nzgd2000_deformation_20171201_full.zip |
|---|--|

# ISO Geodetic Registry

|                    |  |
|--------------------|--|
| <i>Item class</i>  | OperationMethod  |
| <i>Name</i>        | <b>NZGD2000 Deformation Model</b>  |
| <i>Item status</i> | VALID  |
| <i>Identifier</i>  | 81   |
| <i>Data source</i> | ISO Geodetic Registry  |
| <i>Remarks</i>     | This model provides the relationship between a global reference frame (ie one of the ITRFs) and the local reference frame (NZGD2000). It includes both functional definitions and spatial representations for a range of geophysical deformation sources that are represented as discrete sub-models. Each sub-model may include both horizontal and vertical deformation elements, as well as uncertainties. A sub-model is built of one or more components (such as co-seismic and post-seismic components) that when added together give the total deformation for that event. Each component consists of a time function and a spatial representation. The time function defines how a time-based scale factor gets applied to each deformation element. |

## Operation parameters

*NZGD2000 deformation model files*