## **ISO Geodetic Registry**

Item class Transformation

NZGD2000 to NZVD2009 - NOHt [LINZ]

Item statusVALIDIdentifier681

Alias NZGeoid2009

Information source Title Standard for New Zealand Vertical Datum 2009

Author Office of the Surveyor General Publisher Land Information New Zealand

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Issue identification LINZS25004

Data source ISO Geodetic Registry

Remarks Grid transformation using quasigeoid model New Zealand Quasigeoid

2009 (NZGeoid2009).

Operation version LINZ

Scope Spatial referencing.

Operation accuracy 0.06 m

Source CRS NZGD2000 - LatLonEHt Target CRS NZVD2009 - NOHt

Operation method Geographic3D to Gravity Related Height (NZgeoid)

South-bound latitude

#### Extent

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.

West-bound longitude
North-bound latitude
East-bound longitude
160.0
160.0
170.0

#### Operation parameter values

Geoid (height correction) model file nzgeoid09.sid

-60.0

# ISO Geodetic Registry

Item class OperationMethod

Name Geographic3D to Gravity Related Height

(NZgeoid)

Item status VALID
Identifier 92

Data source ISO Geodetic Registry

Remarks This transformation involves the application of a geoid-ellipsoid

separation value interpolated from a quasi-geoid model. The model provides separation values at the nodes on a regular grid of latitude and longitude intersection points. The geodetic latitude and longitude used to interpolate within the grid are not affected by this transformation. The grid is referenced to a specific geographic CRS (the source CRS) and interpolation must be made in this system. Calculation of the separation is achieved through a bi-linear interpolation of the grid, using the latitude and longitude of the point. This step provides the geoid-ellipsoid separation (N) above the ellipsoid of the source Geographic 3D CRS. The normal orthometric height (H) in the target vertical CRS is then determined from: H = h - N where h = the height above the ellipsoid in the source geographic 3D CRS.

### Operation parameters

Geoid (height correction) model file