

Surveyor-General's Ruling 2004/1



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| <i>File No.</i> | CA-S30-06-00 |
| <i>Title</i> | Surveyor-General's Ruling 2004/1 - Bearings to be in terms of Official Survey Projection and Geodetic Datum. |
| <i>Keywords</i> | Official geodetic datum, NZ Geodetic Datum 2000, official survey projection, New Zealand Geodetic Datum 2000, NZGD2000, Meridional Circuit Projection, NZGD49, Old Cadastral Datum, S47(5) Cadastral Survey Act 2002, Rules 23 & 24 Surveyor-General's Rules for Cadastral Survey 2002/2. |

Purpose

To clarify the application of Rules 23 and 24, Surveyor-General's Rules for Cadastral Survey 2002/2.

This ruling specifies:

- that the approved official survey projections are the New Zealand Geodetic Datum 2000 Meridional Circuit Projections
- particular cases where these projections may be substituted by alternative projections (NZGD49 Meridional Circuits or Old Cadastral Datum circuits).
- that the official geodetic datum is the New Zealand Geodetic Datum 2000 (NZGD2000).

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| A. Official Survey Projection | New Zealand Geodetic Datum 2000 Meridional Circuit Projection 1. Pursuant to Rule 23(1)(b) the Surveyor-General approves the following survey projections as the appropriate official survey projection for the bearings of a cadastral survey dataset within the particular circuit in which that CSD is located : NZGD2000 Meridional Circuit projections: <ul style="list-style-type: none">• Mt Eden 2000• Bay of Plenty 2000• Poverty Bay 2000• Hawkes Bay 2000• Taranaki 2000 |
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| | <ul style="list-style-type: none"> • Tuhirangi 2000 • Wanganui 2000 • Wairarapa 2000 • Wellington 2000 • Collingwood 2000 • Nelson 2000 • Karamea 2000 • Buller 2000 • Grey 2000 • Amuri 2000 • Marlborough 2000 • Hokitika 2000 • Okarito 2000 • Jacksons Bay 2000 • Mount Pleasant 2000 • Gawler 2000 • Timaru 2000 • Lindis Peak 2000 • Mount Nicholas 2000 • Mount York 2000 • Observation Point 2000 • North Taieri 2000 • Bluff 2000 |
| <p>B. Alternative Projection – NZGD49</p> | <p>Particular cases where NZGD49 Meridional Circuit Projection may be used as an alternative to the official survey projection</p> <p>Pursuant to Section 47(5) Cadastral Survey Act 2002, the Surveyor-General considers compliance with Rule 23(1)(b) is impractical or unreasonable in the following particular cases and specifies the following alternative requirements:</p> <p>In the particular case:</p> <ol style="list-style-type: none"> 1. Where there are no reliable NZGD2000 6th or higher order marks within 500 metres of any mark located or placed by the survey; or 2. In the case of the following specific types of survey: <ul style="list-style-type: none"> • Survey Office (SO) Record Purposes surveys; • Survey Office (SO) survey information surveys; • Flat or Unit CSDs where the underlying parcel is in NZGD49 Datum; • Surveys defining non-primary parcels, such as easements, covenants, mining licences and leases, where the underlying survey is in NZGD49 Datum and the underlying parcels are not being redefined; • Compiled or Computed CSDs where the underlying |

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| | <p>surveys are in NZGD49 Datum.</p> <p>The bearings may either be in terms of the:</p> <ol style="list-style-type: none"> 1. Official survey projection or ; 2. NZGD49 Meridional Circuit survey projection for the particular circuit in which the CSD is located. |
| <p>C. Alternative Projection - Old Cadastral Datum Meridional Circuit</p> | <p>Particular cases where the Old Cadastral Datum Meridional Circuit may be used as an alternative to the official survey projection or NZGD49 Meridional Circuit Projection</p> <p>Pursuant to Section 47(5) Cadastral Survey Act 2002, the Surveyor-General considers compliance with Rule 23(1)(b) is impractical or unreasonable in the following particular cases and specifies the following alternative requirements:</p> <p>In the particular case:</p> <ol style="list-style-type: none"> 1. Where there are no reliable NZGD2000 6th order or higher order marks, and no reliable NZGD49 3rd order or higher order marks, and no reliable traverse marks from an approved CSD in NZGD49 datum within 500 metres from any mark located or placed by the survey; or 2. In the case of the following specific types of survey: <ul style="list-style-type: none"> • Survey Office (SO) Record Purposes surveys; • Survey Office (SO) survey information surveys; • Flat or Unit CSDs where the underlying parcel is in Old Cadastral Datum; • Surveys defining non-primary parcels, such as easements, covenants, mining licences and leases, where the underlying survey is in Old Cadastral Datum and the underlying parcels are not being redefined. • Compiled or Computed CSDs where the underlying surveys are in Old Cadastral Datum. <p>The bearings may either be in terms of the:</p> <ol style="list-style-type: none"> 1. Official survey projection or; 2. NZGD49 Meridional Circuit projection or; 3. the Old Cadastral Datum Meridional Circuit in which the CSD is located. |
| <p>D. Official geodetic datum</p> | <p>Pursuant to Rule 24 the Surveyor-General approves the New Zealand Geodetic Datum 2000 (NZGD 2000) as the official geodetic datum.</p> |

Notes

1. More details on NZGD2000 projections can be found in the fact sheet “New Zealand Geodetic Datum 2000 Meridional Circuits” available from the LINZ web site at:
http://www.linz.govt.nz/rcs/linz/6075/nzgd2000_meridionalcirc.pdf
2. The above requirements modify current statements in Section 3.5 and 3.7 the Cadastral Survey Guidelines. Key changes are:
 - The distance criteria for the use of NZGD49 or Old Cadastral Datum has been decreased from 1km to 500 metres.
 - The distance criteria applies to all marks located or placed by the survey (including the origin marks).
 - The method for applying the distance criteria to a particular configuration of survey data and control stations is described in Section 3.5.1.1.1 and Diagram 3.1 of the Cadastral Survey Guidelines except that 500m should be substituted for 1km in the text and diagram.

The guidelines will be amended to reflect these changes.

3. NZGD49 and NZGD2000 bearings are usually the same but recent comparisons between NZGD2000 and NZGD49 have identified some local exceptions.

Where existing NZGD49 or Old Cadastral bearings are being claimed as being in terms of NZGD2000, surveyors must confirm and report that there is no significant local bearing difference between the two projections (refer Rule 3B(1)(a)). This requirement is a change from the current expectation outlined in the CS Guidelines. The method for the surveyor to do this is not prescribed

4. Where the surveyor further considers compliance with Rule 23(1)(b) is impractical or unreasonable, he or she may seek a dispensation pursuant to s47(5) Cadastral Survey Act 2002.

D Grant
Acting Surveyor-General