

## Brief

### for the development of a

# Utility Location Standard

Parties are invited to register their interest and provide feedback on this brief.

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#### Summary

The Surveyor-General is going to develop a Standard that can be used to define the location of utility assets. This document provides a brief outline of this work.

#### Purpose

The Standard is intended to be used for collecting information on the location of utility assets, such as when preparing 'as built' records.

Applying the standard will enable the spatial information recorded in an Asset Management System to be accurately overlaid with other types of spatial information, in three dimensions.

It will also enable the asset to be confidently relocated using GNSS technology at any time in the future.

#### Target audience / users

Any utility organisation or asset manager will be able to specify the use of the Standard for creating or maintaining assets, including in contracts. It could also be referenced when specifying standards for asset management systems.

Contractors, surveyors and engineers would comply with the Standard when providing asset information (such as 'as built' records).

The Standard will be made readily accessible on the LINZ website.

#### Authority

The Surveyor-General is offering to provide and maintain this standard as the SG has a statutory and technical leadership role in providing the positioning framework (e.g. projections, survey control network).

Asset managers will be able to mandate the use of the Standard, including through contract conditions.

Support from all utility and asset managers will be sought, in order to achieve widespread adoption and collective benefits.

#### Coordinate reference system

The Standard will specify the use of suitable coordinate reference systems when providing positions (coordinates). These are likely to be the [NZ Transverse Mercator 2000](#) and the [NZ Vertical Datum 2016](#). Both are national in scale, and can be readily transformed to other coordinate reference systems.

#### Accuracy

The Standard will specify both horizontal and vertical accuracy standards. For the purpose of readily locating assets, a nominal accuracy of approximately 0.15 m is anticipated. For invert levels a much higher level of accuracy will be specified. A single universal standard is preferred, rather than offering users a choice.

Accuracy will be specified in terms of the national survey control system, effectively requiring surveying in terms of high accuracy marks in the geodetic database. The Standard will anticipate the use of GNSS technologies.

### Scope

The Standard will be focused on the position (coordinates) associated with an asset.

Data about the asset itself is excluded. Separate requirements for an 'as built' can refer to the nature of the asset and any related standards.

### Development process

The Standard will be drafted internally by LINZ commencing in July 2020. It will then be presented to a focused reference group in September 2020 for initial review.

LINZ will then publish the draft Standard for widespread consultation, in liaison with utility organisations and interested parties.

The aim is to publish the Standard early in 2021.

## Anselm Haanen Surveyor-General / Kairūri Matua

Parties are invited to register their interest and provide feedback to [utilitylocation@linz.govt.nz](mailto:utilitylocation@linz.govt.nz) until 31 July 2020.

NZ Transverse Mercator 2000: <https://www.linz.govt.nz/regulatory/25002>

NZ Vertical Datum 2016: <https://www.linz.govt.nz/data/geodetic-system/datums-projections-and-heights/vertical-datums/new-zealand-vertical-datum-2016-nzvd2016>