

Feedback by

Hamilton City Council Staff

LAND INFORMATION NEW ZEALAND'S UTILITY LOCATION STANDARD - VERSION 1.0 - DRAFT FOR CONSULTATION

3 March 2021

It should be noted that the following feedback is from staff at Hamilton City Council and does not necessarily represent the views of the Council itself.

1.0 SUMMARY OF KEY POINTS

- 1.1 Support the development of a National Utility Location Standard for recording the location of utility assets. We agree that consistency and confidence in positional information of assets is important and that this will improve relocation of assets and design planning.
- 1.2 Seek a definition of Utilities and that the definition should include both underground and aerial and both large and small utilities.
- 1.3 Seek clarification of the proposed different accuracy levels when a piece of infrastructure runs through residential property.
- 1.4 Seek clarification on why specification of points on and around the asset are not provided for in the proposed standard.
- 1.5 Support nationwide use of the Standard in principle but notes that there will be implementation issues that will need to be considered including sub-regional agreement, and how to manage risk associated with potential inaccuracies related to old data and conversions.

2.0 INTRODUCTION

- 2.1 Hamilton City Council is the fourth largest city in New Zealand and is responsible for managing water, wastewater, and stormwater utilities for a population of over 176,500. Hamilton City's high growth means that its utilities must be locatable for renewal, replacement, augmentation, and investigations.
- 2.2 HCC staff support the overall intent and direction of the Utility Location Standard (LINZ Toitū te whenua - Version 1.0 - Draft for Consultation) in which utility asset positions are defined accurately in three dimensions.
- 2.3 We agree that a specification for recording positions of utilities will provide for confidence in relocating assets.
- 2.4 HCC staff are seeking twin digitalisation of its infrastructure and consider that this standard will ultimately ensure that such digitalisation is based on quality data.
- 2.5 We consider that spatial accuracy improvements and uniformity across the country is important, especially bearing in mind water reforms and amalgamation of water authorities and datasets. However, a change of vertical datum might have more far-reaching consequences.

3.0 SCOPE OF USE

- 3.1 It is not clear if the Standard applies to smaller utilities such as gas, power and telecommunications. It would be very useful for all infrastructure managers to have three coordinated datasets. A definition of Utilities would be a useful addition to the Standard and could consider inclusion of the smaller utilities.
- 3.2 It is also not clear if the Standard can be used for both aerial and underground utilities. HCC staff consider that the scope of this Standard should include these. The definition of Utilities discussed in Section 3.1 could provide for this if appropriate.

4.0 ACCURACY STANDARDS AND SURVEY POINTS

- 4.1 Table 4.5, Criteria 6 specifies that an asset within a residential property has a vertical class of V3 i.e. 300mm vertical tolerance, but an asset in an urban area has vertical class V1 (20mm tolerance). It is not unusual to have Council-owned assets running through residential properties and these will be mainly in urban areas. The level of accuracy of the same sewer pipe and any associated assets (MH) could be lower for the length of it contained within a residential property boundary. HCC staff are interested to understand the rationale behind this.
- 4.2 Section 4.5 does not specify which points on or around the asset are required to be surveyed. The specification of such points, along with other information about the asset, needs to be specified by the asset manager. Drawing the alignment of a pipe is basically a 'join the dots' exercise, from survey point to survey point. A longer pipe alignment interpolated from only three survey points for example, might be significantly less accurate than the same pipe alignment created from say, ten, more closely spaced survey points. HCC staff are interested to understand the rationale of not specifying extents of points being surveyed.

5.0 USE OF THE STANDARD

- 5.1 HCC staff understand that the Standard is not mandatory, and notes that cost is provided as a reason. HCC generally supports, in principle, the Standard being used nationally, as far as practicable. HCC staff note the following implementation considerations: (1) Cross-boundary considerations where shared infrastructure technical specifications are used by contractors and surveyors to get consistency across council borders. There will need to be agreement between Territorial Authorities. (2) GIS uses different coordinates, including vertical datum and also local datum for coordinates, north and south, therefore alignment will be required.
- 5.2 If the new Standard was to be used and a new vertical datum were to be adopted, consideration will also need to be given to the implications of converting existing data. There will be potential quoting risks e.g. design floor levels on consents being specified to a different datum used for flood mapping and LiDAR. There is also a risk of new levels not interfacing with a vast amount of existing datasets across all corners of the organisation (such as LiDAR, flood levels, floor levels etc.).
- 5.3 Some existing Z values may need converting to a new datum to avoid mixing and matching of data e.g. floor levels set by surveyors using new datum V and modelled flood levels based on old datum. The amount of conversion would be significant. Quoting levels to different elevations (e.g. in GIS) would mean the interface between old and new networks would be incorrect, as they would be in any related hydraulic models.
- 5.4 There is also the potential issue of very low accuracy with old utilities data traced from old plans versus all the new GIS and IPS records that are done through submission of DXF and done with higher survey standards.
- 5.5 HCC staff are currently considering retaining current Height datum field and adding another field for height datum (NZVD), as many surveyors find that if they use the converted NZVD datum information for closing their height levels, there will be a difference when levelling is done from one height

benchmark to another.

6.0 FURTHER INFORMATION AND OPPORTUNITY TO DISCUSS OUR FEEDBACK

- 6.1 Should Land Information New Zealand require clarification of the above points, or additional information, please contact Rae Simpson (Senior Planner, City Waters), phone 07 838 6427, email raewyn.simpson@hcc.govt.nz in the first instance.
- 6.2 Hamilton City Council staff would welcome the opportunity to discuss the content of our feedback with Land Information New Zealand in more detail.

Yours faithfully



Richard Briggs
CHIEF EXECUTIVE