

Update on proposed Rules for Cadastral Survey – July 2008

The expert committee reviewing the proposed Rules for Cadastral Survey has started the lengthy process of considering the submissions received during public consultation.

During the two day meeting held in June, the committee made decisions about the shape of the final Rules and developed solutions, in agreement with the Surveyor-General, on some of the main issues that were raised by submitters.

Another meeting to consider the remaining issues is planned for late August and a final meeting is tentatively planned for October.

The following decisions have been made on the matters of greatest concern to submitters.

Boundary marking	<p>The Rules will require most boundaries to be marked. The need to mark the boundaries of land intended to remain in Crown ownership or under the jurisdiction of the Maori Land Court (MLC) can be determined by the relevant Crown agency or the MLC. As such, boundary marking in these cases will not be required by the Rules. Where possible, scenarios where dispensations could reasonably be granted will be incorporated into the Rules.</p> <p>Various options to enable first monumentation to occur after the initial lodgement of a Cadastral Survey Dataset were carefully considered, noting the problems that arise when pegs have to be replaced during the development cycle. However, no other workable option could be found.</p>
Boundary marks	<p>Where practicable, a boundary mark will need to be a traditional peg (if wooden) or, alternatively, another type of mark that is clearly labelled as a boundary mark.</p>
Accuracy tolerances	<p>Two levels of tolerances will be prescribed:</p> <p>(1) One set will be similar to the levels in the current Rules (ie tighter than those proposed). These will apply to new vectors at a 95% level of confidence. They will set a general expectation for the accuracy of surveyor's work and would need to be matched by the measuring techniques and equipment chosen. The application of these new rules would be very similar to that currently employed in the Landonline validation checks and will use root sum square (RSS).</p>

(2) A second set, mostly 50% higher than the first set, will apply to **all** vectors. These will set the **minimum acceptable** level and will be particularly applicable to adoptions. To enable their ready use in the field they will use a simple sum rather than RSS.

There will be **no** equivalent to current rule 26(3) which allows adoptions to not comply with the accuracy standards in the current Rules. The minimum acceptable level has been set reasonably generously so that adoptions from most surveys are expected to comply. Classes C and D will also be available in many cases and dispensations will be possible in rare cases. Otherwise large errors are expected to be resolved, not perpetuated.

Water boundary accuracy	The numeric standard proposed will not be used, as in some cases it would be too loose while in other cases it would be too tight.
Area accuracy	The areas of parcels will need to be calculated correctly from the boundary data and can be rounded to 1:1000 - no specific accuracy levels will be set. This will include parcels with water or irregular boundaries. This approach effectively means that the accuracy of the area is determined by the accuracy of the parcel's boundaries so that the accuracy of the "true" area does not need to be specified.
Orientation	The proposed requirement that all surveys be in terms of an official geodetic projection will not be changed, as this is considered to be very important for the cadastre and re-instatement of boundaries in the long term. However, a new Ruling will enable the use of an alternative datum for a limited time. About 1% of surveys are currently non-geodetic.
Geodetic connection	The spatial accuracy of the cadastre is important for mapping purposes as well as for surveyors. Rather than requiring a control mark to be a PRM, new surveys will be required to connect to a 6 th order or higher mark if it exists within specified distances. The connection will be able to be adopted.
Witness marks and permanent reference marks	The witnessing distance for class A will be set at 150m. The current level is 125m, while 250m was proposed. The number of witness marks needed for large rural surveys can be unreasonable if the Rules require a short witnessing

distance. So in rural areas the proposed distance of 500m will be retained (currently 250m), but the minimum number of witness marks will be increased to four. The witnessing distance will be able to be increased to 1000m in some areas (eg remote / back country). These changes are designed to ensure that an adequate, but not unreasonable, density of witness marks is sustained.

Each survey will require two permanent reference marks (PRMs) within 300m of class A boundaries and 500m of class B.

The requirements for the 10 and 50 year survival times of witness marks and PRMs will be reworded as surveyors are not expected to be responsible where disturbance of these marks could not reasonably be anticipated.

Monumentation CSD

The criteria for use of a monumentation CSD, with its reduced set of requirements, will be extended to include monumentation over almost any previous survey – not just digital surveys. Old witness marks will have to be used and there must be no boundary conflicts. However, the CSD will now have to include vector connection between the monument and the old witness mark.

All CSDs will be required to comply with the Rules, and any boundary marking will need to be recorded in the cadastre. The ability to lodge field notes for this purpose is still being considered.

CSD plan

The diagram of survey that depicts the graphical aspects of the CSD plan will need to include as many vectors as it is practical to show.

The definitions of “measured” and “calculated” will not be included in the Rules (consistent with the current Rules) as the definitions were considered unworkable in practice. Surveyors will have to decide when a vector (such as those obtained by various GPS techniques) is “measured” or when it is “calculated” – possibly with the help of some guidelines.