

**Introducing the**

## **NEW RULES FOR CADASTRAL SURVEY 2010**

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# 1. Overview

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The Rules for Cadastral Survey (the “Rules”) specify the Surveyor-General’s standards for the conduct of cadastral surveys and for cadastral survey datasets (CSDs). They include provisions that address the requirements of tenure system managers.

The cadastre supports various tenure systems including the land transfer system. Certainty of land ownership and other rights in land, coupled with the ability to locate the land on the ground, are essential components of a stable and vibrant economy in which investment is encouraged.

The Rules are issued under section 49 of the Cadastral Survey Act 2002 and have the same status as regulations.

A comprehensive review of the Rules has been undertaken and new Rules will come into force in 2010.

## 1.1 Purpose of this document

The primary aims of this document are to support the implementation of the new Rules by:

1. Helping surveyors understand the significant changes to the Rules before they come into force. The specific changes to the rules are covered in section 3, while related aspects are covered in subsequent sections.
2. Providing surveyors with sufficient early advice about transitioning to the new Rules. In particular this document includes advice on how surveys started before they come into force can be undertaken in a manner that could comply with the new Rules if the CSDs are lodged after the Rules come into force.

## 1.2 Why were the Rules reviewed?

The current Rules were reviewed for a number of reasons:

- To align the Rules with the Cadastral Survey Act 2002, which made some fundamental changes to the previous Survey Act 1986 under which the current 2002/2 Rules are based.
- To better align the Rules to the achievement of the cadastral outcomes and objectives.
- To specify more clearly the enforceable requirements (some were only covered in guidelines).
- To ensure that the Rules allow for changes in survey technology and methods.

## 1.3 Setting the level of intervention

The proposed Rules have been developed using a risk-based approach while aiming to achieve an optimum level of regulatory intervention. This approach helps ensure that the requirements are justifiable and do not unreasonably limit the methods that surveyors can use to comply with them.

In essence, the Rules are intended to define ‘what’ is needed – surveyors determine ‘how’ to achieve it.

## 1.4 Beneficiaries of the Rules

The Rules are directed primarily at licensed cadastral surveyors. However the primary beneficiaries of this regulatory intervention are not surveyors but:

- holders of rights, restrictions, and responsibilities in land, including their agents. The Rules help ensure that they can have confidence in the boundaries of their rights, so that they can efficiently identify, trade, and use them, and
- central and local government agencies that rely on the cadastre for various public purposes.

## 1.5 Clarifying the accountabilities

The Cadastral Survey Act 2002 has clarified the accountabilities in relation to cadastral surveys and cadastral survey datasets.

- The surveyor who certifies a cadastral survey dataset is fundamentally accountable for the correctness of the survey and all the data in that dataset. The Act clearly states that this accountability is not affected by the fact that the survey has been approved by LINZ.
- The Chief Executive of LINZ is responsible for determining whether a CSD complies with the Rules and for integrating new cadastral surveys into the cadastre.
- The Surveyor-General is accountable for the broad achievement of the cadastral end outcomes, setting of standards, and auditing compliance with the standards.

The new Rules clearly specify the cadastral survey standards that licensed cadastral surveyors have to comply with and for which they are accountable under the Act.

## 1.6 How the Rules were reviewed

The Rules were initially reviewed by the Surveyor-General and a new set of Proposed Rules were developed with the help of an expert committee that included representatives of professional groups, managers of the tenure systems, and LINZ staff.

This was followed by a period of public consultation where the Proposed Rules were presented to survey practitioners and other interested parties at a series of seminars around New Zealand in late 2007. Submissions were received from stakeholders and from the general public.

The expert committee considered all the submissions. A significant number of changes were made in response to those submissions before the Rules were finalised. The key differences between the Proposed Rules (used for the public consultation) and the final Rules are described in Appendix B.

The development process is now complete and the new Rules have been finalised and endorsed by the Surveyor-General. They are not open for further consultation.

## 2. Implementing the new Rules

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The new Rules for Cadastral Survey 2010 are scheduled to come into effect in May 2010.

The implementation of the new Rules is heavily dependent on Landonline, which is now used for the capture and processing of all cadastral surveys. As Landonline can only support one set of Rules at a time, the new Rules will come into effect on the same date as a Landonline update. After that date all CSDs will have to be certified in terms of the new Rules (although provisions are being considered to address some transitional non-compliance).

The published "Rules for Cadastral Survey 2010" will be formally gazetted early in 2010 once the exact date of the Landonline release is known.

Surveys that are partially completed at that time will need to be carefully managed to avoid, or at least minimise, the amount of rework that might be required. These issues are discussed in more detail in section 7 of this document.

# 3. Key differences from the Surveyor-General's Rules 2002/2

This section identifies the key differences between the current *Surveyor-General's Rules for Cadastral Survey 2002/2* and the new *Rules for Cadastral Survey 2010*.

It is not intended to be a comprehensive guide to the new Rules, and does not cover all of the changes or the key differences in detail.

## 3.1 Accuracy

### Class of boundaries

- The Rules provide for four classes of survey that apply only to the accuracy of the boundaries and boundary points (rather than parcels or surveys) [rule 3.2].
- Classes are A (similar to current class I), B (rural and extensive rural), C (significantly lower accuracy and available in specified rural situations, mainly for adopted boundaries), and class D (no accuracy standard, available in specified rural situations) [rule 3.2].
- There is no longer a peri-urban accuracy class (current class II).
- "Class" only applies to boundaries – the accuracy standard between non-boundary marks is the same for all surveys, irrespective of the boundary classes.

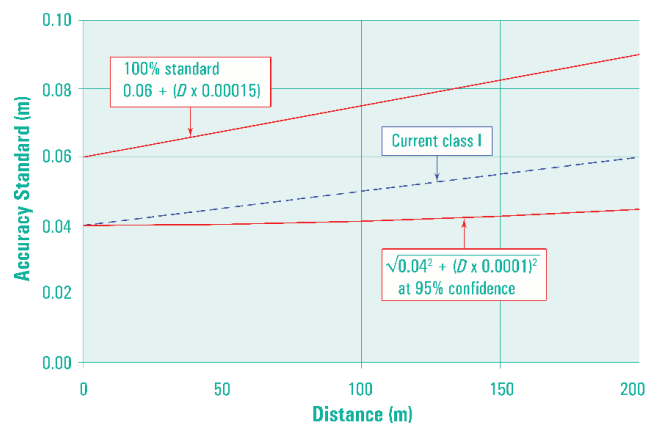
### Accuracy framework

- Accuracies are specified for *non-boundary marks* [rule 3.1] and for *class A, B and C boundaries* (there is no specified accuracy for class D) [rule 3.3].
- A two-tier system is used to specify the accuracy standards:
  - 95% standard:** There must be a 95% likelihood that the relationship between all points, other than adopted points, meets the more stringent tolerance. The tolerance is calculated by a root sum squared method (RSS).

**100% standard:** the relationship between all points, including adopted points, must not exceed a less stringent tolerance (about 50% greater than the 95% standard). The tolerance is calculated by a straight sum calculation, as in the 2002/2 Rules.

- The diagram below illustrates the accuracy framework, for class A. It shows the relationship between the 100% standard and the 95% standard, and also shows the relationship of these to the current single standard.

### Boundary accuracy standard – Class A



### Accuracy of adoptions

- The 100% standards are intended to allow most existing boundary and traverse vectors to be adopted.
- There is no longer any provision for adoptions that fail the new standards but meet the standards in place at the time they were originally surveyed. However class D ("accepted" boundaries – see section 3.3) or class C will often be available for less accurate rural adoptions (in a similar vein to Class IV under the current Rules) [rules 3.2.3 and 3.2.4]. Existing boundaries that fail to meet the new standards for the applicable class will need to be defined by survey (see section 3.3).

### Accuracy of non-boundary marks (PRMs, witness marks and traverse marks)

- The Rules refer to permanent reference marks (PRMs), witness marks and other marks (including traverse marks) that are not boundary marks as “non-boundary marks”.
- The non-boundary accuracy standards apply to the relationship between any non-boundary mark and any other non-boundary mark irrespective of whether a surveyor has measured between them or not (as with the 2002/2 Rules) [rule 3.1].
- An upper limit of 0.50m is specified [rule 3.1(c)]. This cap equals the 95% tolerance at 5km. This limit helps protect the accuracy between adjacent surveys where long range technology such as GPS is used.

### Witnessing accuracy

- The witness to boundary point accuracy standard applies specifically to all non-boundary marks within the witnessing distance of the boundary point, ie all marks that could be used to re-establish the boundary point, whether identified as a witness mark or not [rule 3.6].
- The class A tolerance is 0.04m compared to the current class I tolerance of 0.03m [rule 3.6].
- The class B tolerance is 0.20m compared to the current class II tolerance of 0.06m and the current class III tolerance of 0.13m [rule 3.6].

### Accuracy of water boundaries and irregular boundaries

- The accuracy required for new and **existing** water and irregular boundaries is not specified mathematically, but must be assessed by the surveyor against specified criteria (risk of overlap, nature of physical feature, value of the land, etc) [rule 3.4].

- The vectors to the points where water and irregular boundaries intersect with other boundaries must meet the accuracy standards applicable to those other boundaries [rule 9.6.13(c)].

### Accuracy of permanent structure boundaries

- Where a permanent structure boundary does not coincide with an actual permanent structure, the relationship between the two must meet the witnessing accuracy standards [rule 3.5].

## 3.2 Geodetic orientation and connection

### Geodetic orientation

- All field surveys defining a new primary parcel boundary point must be oriented in terms of an official geodetic projection (NZGD2000 meridional circuit) [rule 4.1].
- However, this orientation requirement will be partially relaxed for 12 months following the commencement of the new Rules through a Ruling by the Surveyor-General.
- The method of obtaining an origin of bearings is not specified. Nor is the origin required to be identified in the diagram of survey, although surveyors can choose to do so (there is no longer a special symbol for an origin mark). However, the survey report must include the basis for determining the orientation of the survey [rule 8.2(a)(ii)].
- All bearings must be accurately oriented in terms of the relevant circuit in order to comply with the accuracy standards. This means that surveyors will need to assess the adequacy and accuracy of their source of orientation (bearing origin) rather than simply adopting it from a previous survey without such assessment.

## Geodetic connection

- Most field surveys will have to connect to a nearby order 6 or better mark. If they define a new boundary point, mark a boundary point, or connect to an old boundary mark on a primary parcel under survey, they must connect to a “cadastral survey network mark” if one exists within the specified distances of one of those points. The distance for class A is 500m and for class B is 1000m [rule 4.2].
- An origin of coordinates is not required and need not be identified on the diagram of survey.
- Reduced levels must be in terms of an official vertical datum if there is a vertical control mark (order 3V or higher) within specified distances of a boundary point (200m for class A, 500m for class B) [rule 4.3].

## 3.3 Boundaries

### Boundary definition

- Boundaries must be either “defined by survey”, “defined by adoption” or “accepted”; each level of definition having specific criteria [rules 6.2, 6.3, & 6.4].
- The surveyor takes responsibility for boundaries that are *defined by survey*. A “surveyor’s duty when defining a boundary by survey” is specified [rule 6.1]. This includes gathering all the evidence relative to the definition of the boundary. The surveyor may decide to adopt some of this evidence from a previous survey.
- The surveyor needs to ensure that boundaries *defined by adoption* meet the accuracy standards.
- Some boundaries can just be *accepted* as they are (in a similar vein to current class IV). Accepted boundaries are class D [rule 3.2.4(a)].

### Boundary types (form of boundary)

- A boundary against a water body is now called a “water boundary”, not a “natural boundary”.
- A term “stratum boundary” is introduced for a boundary that is defined with a third dimension.
- “Permanent structure boundaries” are introduced for use with units, cross-leases and building leases [rule 6.9]. There are no provisions for a “definite feature” boundary.
- “Permanent structure” is a term defined for a structure sufficiently permanent and well defined that it can be used for locating the position of a boundary in the future – fences or kerbs would not generally meet the 50-year criteria.
- The term “estate boundary” is introduced. It applies to what has been commonly called a “CT boundary” but is defined more broadly to also include other land tenures.
- New irregular boundaries are permitted only in a few specified cases (landward boundary of marginal strip, where the boundary is *accepted*, some class C boundary scenarios) [rule 6.6].
- Dried up water boundaries need to be right-lined, except in specified cases [rules 6.6 & 6.7].

## 3.4 Marks

### Witness marks

- Boundary points on primary parcels that are being *defined by survey* must be witnessed [rule 7.3.1]. This includes all boundary points (including existing points) on a class A primary parcel less than 0.4ha [rule 6.2(a)(iv)].
- Old marks on primary parcels under survey that have been connected to must be witnessed [rule 7.3.1(c)].
- Boundary points on some leases must be witnessed [rule 7.3.1(b)].

- A minimum of three witness marks are required for class A. A minimum of four witness marks are required in other cases [rule 7.3.2(c)].
- The witnessing distance for class A is 150m, compared to 125m for the current class I. The witnessing distance for class B is 500m, compared to 250m for current classes II and III [rule 7.3.2(a)].
- Vertical control marks must be used to witness stratum boundary points in certain cases [rule 7.3.4(b)].
- Witness marks are to be placed so that they can be reasonably expected to survive for a minimum of 10 years [rule 7.3.3(b)].

### Permanent reference marks

- A survey that requires a witness mark (see above) must have a minimum of two PRMs [rule 7.4.1].
- PRMs are to be placed so that they can be reasonably expected to survive for a minimum of 50 years [rule 7.4.3(a)].
- Each PRM must be within specified distances of at least one boundary point within the survey (300m for class A, and 500m for class B) [rule 7.4.2]. They are not required to be within the specified distance of ALL boundary points.
- A mark can serve as both a PRM and a witness mark, provided it meets the criteria for both [rule 7.4.3(c)].
- Two PRMs on a survey must have reduced levels if the survey includes a stratum boundary point [rule 7.4.3(d)].

### Traverse marks

- The Rules specify requirements for PRMs, witness marks, non-boundary marks, and boundary marks. There are no specific requirements for “traverse marks”.

### Boundary marking

- Boundary marking is generally required for primary parcels where the land is to be held under the Land Transfer Act [rule 7.1].
- The Rules do not require marking for new points on a common boundary between parcels to be held by the Crown, nor for Maori Land Court (MLC) surveys (although the Crown agency or the MLC may require the marking) [rule 7.1(a)].
- Marking is not required between land being retained in common ownership, between reciprocal rights of way, where occupation adequately defines the boundary, or where it is unlikely that future physical location of the boundary is required [rule 7.1(a)].
- Right-of-way or other non-primary parcel boundary marking is not required by the Rules.
- There is no requirement to label a boundary mark with lot numbers or a broad arrow.
- Boundary marks must be a traditional peg, a post, or other type of labelled peg, or otherwise another type of mark which must be labelled where practical [rule 7.2].

### Old marks disturbed

- Old marks found disturbed must be treated as new marks in the new position [rule 7.6].
- A disturbed mark is defined to mean that it is not in the position originally placed. The fact that the measured position of an old mark does not fit the adopted position is not sufficient reason for it to be called “disturbed” (previously these were sometimes called “unreliable” – a term that is not applicable under the new Rules).

### Old marks “no record”

- An old mark “no record” is not permitted (by definition). Where an existing mark for which there is “no record” is found on a survey and included in

a CSD, it must be treated as a new mark on the survey, or may be treated as evidence of occupation – similar to a fence post.

## 3.5 Parcels

### Accounting for all the land under survey

- A CSD must account for all portions of a parcel being extinguished in **every** case (including legalisation surveys) [rule 5.1(a)].

### Parcel types

- “Primary parcel” and “non-primary parcel” are specifically defined. The Landonline terms “secondary” parcel and “tertiary” parcel are not used in the Rules. These are considered to be “non-primary” parcels.
- The term “underlying parcel” is defined to mean the parcel that is encumbered by a non-primary parcel (for example a servient tenement) – this definition does not include the current informal use of the term, normally meaning the parent parcel being subdivided.

### Parcel appellation

- “Lot” and “Section” parcel types remain unchanged [rule 5.5.2].
- Unit types are limited expressly to those in the Act (ie not “Unit”, but “Principal Unit”, “Accessory Unit”, “Future Development Unit”) [rule 5.5.2].
- A new parcel type of “Area” is required for flats, leases, easements, covenants, etc (rather than “Marked” or “Shown”) [rule 5.5.2].
- There are new “Marginal Strip” and “Esplanade Strip” parcel types [rule 5.5.2].
- Appellation numbering must follow specifically defined formats for each parcel type. Units, leases

and licences start with a number that can be followed by a letter. Other non-primary parcels must only use one or two letters [rule 5.5.4].

### Parcel width

- Very narrow parcels are not permitted. For class A boundaries, a parcel must be at least 0.10m wide at some point. For other classes, a parcel must be at least 0.20m wide at some point [rule 5.4].

### Parcel area

- The parcel area must be correctly calculated from the boundary information, rather than requiring it to be related to the “true” area as in the current Rules [rule 5.3(c)].
- The area for a stratum parcel must be determined for the “vertical shadow” or “birds-eye view” from directly above [rule 5.3(b)]. This means that the sum of the areas of overlapping stratum parcels is likely to exceed the total area of the original primary parcel.
- An area is required for portions of land depicted as accretion [rule 5.3(a)(iii)]. They are required to be identified as part of the new primary parcel, not as a separate parcel.
- The Rules do not require an area for portions of land depicted as erosion.
- The sum of the areas of all primary parcels is not required.

### Movable marginal strips

- Movable marginal strips are defined to be non-primary parcels.
- Movable marginal strips are not required by the Rules to be depicted on a CSD, but if they are depicted, they must comply with the Rules.
- The landward boundaries of these strips must be irregular boundaries [rule 6.6(c)].

- A movable marginal strip included in the CSD must be clearly depicted as being included *within* its underlying primary parcel [rules 9.6.6 & 10.4.4].
- A separate numerical area for a marginal strip must not be shown on the diagram of parcels in the Title Plan [rule 10.4.2(d)(iv)].

### 3.6 Cadastral survey datasets

A CSD consists of a number of components as indicated in the following diagram [rule 8.1].

#### CSD types

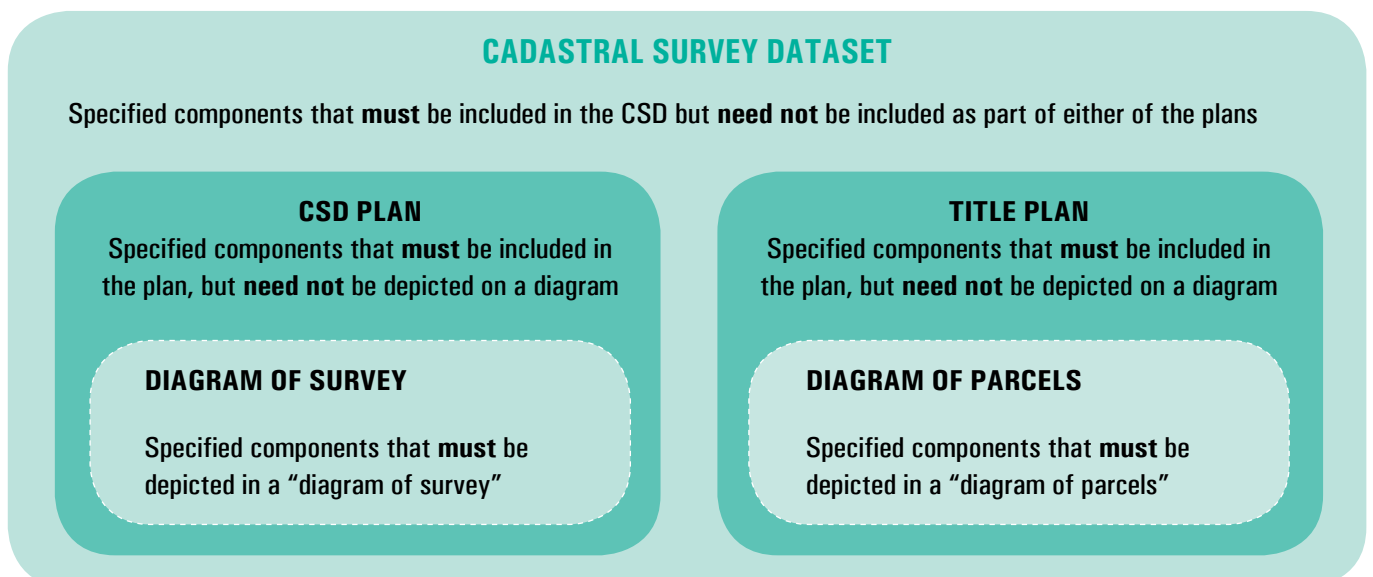
- All CSDs must be certified as complying with the Rules etc. There are no longer any provisions for approval of CSDs “for record purposes only” or “survey information only”.
- The Rules do not specifically require or enable “computed” or “compiled” as types of CSDs although some CSDs may indeed be produced solely through computation or compilation. These types of CSD may still be retained as a LINZ/Landonline requirement.

- Although the Rules do not specify Legalisation, Land Transfer, Maori Land, Cross lease, or Unit CSD types, these types of CSD may remain as a LINZ/Landonline requirement.

#### CSD content

- Sufficient vectors must be depicted on the diagram of survey in the CSD plan to enable the spatial relationship between all marks and points to be determined [rule 9.6.13(a)].
- Sufficient (additional) vectors must be included in the CSD, but not necessarily on the diagram of survey, to also *verify compliance* with the accuracy standards [rule 8.1(d)].
- The CSD must include at least two vectors for each boundary point and each new survey mark, but not necessarily on the diagram of survey.
- Vectors must be identified as being *measured*, *calculated* or *adopted* [rule 12.3]. For vectors that are not adopted, the surveyor determines whether a vector is considered primarily “measured” or primarily “calculated”.

#### Components of a cadastral survey dataset



- There is no requirement to include the actual *measured* vectors – the relationship between marks or points in a CSD can be provided by calculated vectors.
- The CSD must include sufficient vectors to determine and verify the position of the end points of water and irregular boundaries [rules 9.6.13(c) & 8.1(d)].
- Traverse sheets are not required by the Rules.

### CSD plan

- The term “CSD plan” replaces “Digital Survey Plan” [rule 8.1].
- The CSD plan must include a diagram of survey showing the extents of all parcels, with boundary bearings and distances.
- “Occupation” is defined to mean “the physical features that describe the extent of an occupier’s use” rather than the physical objects *in close proximity* to a boundary.
- Esplanade strips must be depicted as non-primary parcels.
- Residue parcels are explicitly defined as the portion remaining in cases such as a claim for adverse possession. They must be depicted on the plans [rule 9.6.3(a)].
- Balance parcels are explicitly defined to apply only to cases such as roads, fixed marginal strips, some railways and water bodies, and not to other types of parcel. They do not need to be depicted on the plans [rule 9.6.3(a)], but must be accounted for as a parcel [rule 5.1].
- New centreline easements are not allowed. Existing centreline easements can continue to be depicted as a centreline in some circumstances [rule 9.6.3(c)].
- Dimensions and boundary points are not required for existing non-primary parcels (eg existing easements) in some circumstances [rule 9.6.14(b)].

- Annotations regarding the quality of the survey or quality of the title are required in specified circumstances [rules 9.6.11 & 9.6.12].
- All information on a diagram of survey must be clear and unambiguous and must be legible when printed at **A3** size [rule 9.6.15]. This requirement allows more information to be depicted on the larger sheet size. However, such a diagram would then not necessarily be legible when printed at smaller sheet sizes. Landonline functionality that could provide this flexibility will not be included in releases 3.3 or 3.4, but may be considered for subsequent releases through the usual process.

### Title Plan

- The term “Title Plan” replaces “Digital Title Plan” [rule 8.1].
- Esplanade strips must be depicted as non-primary parcels.
- Residue parcels must be depicted but balance parcels are not required to be depicted [rule 10.4.2(a)].
- New centreline easements are not allowed. Existing centreline easements can continue to be depicted as a centreline in some circumstances [rule 10.4.2(c)].
- Boundary distances are not required for existing non-primary parcels in some circumstances [rule 10.4.9(a)].
- Boundary bearings are not required (but are depicted in the diagrams on the CSD plan).
- Annotations regarding the quality of the survey or quality of the title are required in specified circumstances [rules 10.4.8].
- All information on the diagram of parcels must be clear and unambiguous, and must be legible when printed at **A4** size [rule 10.4.10].

## Symbology

- A new symbol (three concentric circles) must be used for a permanent reference mark [rule 12.2].
- A new symbol (an open square) must be used for new and adopted boundary posts [rule 12.2].
- A disturbed mark found and used in its new position must be shown as a new mark [rule 12.2(c)] with appropriate notation [rule 9.6.2(e) & (g)].
- Hierarchies of line weights and font sizes are now provided instead of specifying sizes [rule 12.3].
- Three different line styles are specified to differentiate between *measured* vectors, *calculated* vectors and *adopted* vectors [rule 12.3].
- Symbols for occupation information are not specified. Such information is, however, required to be clear and unambiguous.
- No symbol is provided for origin marks, which are not required.

## CSD to be lodged for boundary marking

- Unless it is creating a new parcel, a CSD must be lodged within six months of the placement of a boundary mark [rule 8.5(a)].
- Where boundary points are marked more than once within six months, a CSD recording the final placement only is required [rule 8.5(b)].
- The CSD may be able to be lodged in one of two CSD formats – as a Monumentation CSD (see below), which has significantly reduced requirements, or where the Monumentation CSD criteria are not able to be met, a normal CSD.

## Monumentation CSD

- Rules for a “Monumentation CSD” are introduced to enable lodgement of a minimal set of information to record the placement of boundary marks on previously defined boundary points [rule 11].

- A Monumentation CSD may only be used where specified criteria have been met – essentially where there is little doubt about the correct position of the existing boundary point [rule 11.1].
- Monumentation CSDs [rule 11.2]:
  - do not require boundary marks to be witnessed
  - do not require PRMs
  - do not require geodetic orientation or connection
  - do not require a survey report
  - have reduced specifications for CSD content and CSD plan [rules 11.3 & 11.4]
  - require a vector(s) between the boundary mark and the non-boundary mark used to place it [rule 11.4.1].
- A Monumentation CSD must be certified in the usual manner. Regardless of the reduced requirements, a new boundary monument recorded in such a CSD is expected to have a similar level of evidential weight as a boundary monument in a normal CSD that has been recorded in the cadastre [rule 11.3(b)(i)].

## 3.7 Retention of data

Relevant field data must be retained for at least seven years, or else be included in the CSD for permanent retention by LINZ [rule 14].

## 3.8 Dispensations

Dispensations from the Rules are now not addressed within the Rules themselves. Dispensations will instead be issued under s47(5) Cadastral Survey Act 2002, which allows the Surveyor-General to grant an exemption from the requirements, or specify alternative requirements if satisfied that compliance with the Rules would be impractical or unreasonable.

# 4. Rulings, standards and guidelines

## 4.1 Rulings to be revoked

The following Rulings (related to the Surveyor-General's Rules 2002/2) will no longer be in terms of the new Rules and will be revoked on the date that the new Rules come into effect:

- 2004/1 *Bearings to be in terms of Official Survey Projection and Geodetic Datum*
- 2005/1 *Dispensation to use Parcel Diagrams*
- 2005/2 *Dispensation from Boundary Monumentation*
- 2005/3 *Height Datum*
- 2005/4 *Systematic Adjustment*
- 2007/1 *Representation of movable marginal strips in cadastral survey datasets*
- LINZS10000 *Interim Standard for Computed Cadastral Survey Datasets for Maori Freehold Land*

## 4.2 New rulings

The new Rules require a number of matters to be approved by the Surveyor-General. In addition, a temporary Ruling will be developed to allow non-geodetic bearings to be used for a limited period:

NEW RULINGS TO BE IMPLEMENTED	
Subject	Coverage
Official geodetic datum and projections	NZGD2000 and matching meridional circuits
Official vertical datums	New NZVD2009 and 13 regional MSL datums
Cadastral survey network marks	Order 6 and better
Vertical control marks	Order 3V and better
Use of non-geodetic bearings	Circumstances where bearings are allowed to be in terms of a projection other than the Official Survey Projection (limited to one year from when the Rules come into force)

Additional Rulings may also be implemented, either before or after the new Rules come into effect.

## 4.3 Reviews

The following policies are also affected by the new Rules and are planned to be reviewed:

- OSG Policy 2000/02 *Use of Graphic Description Plans*
- OSG Policy 2002/01 *Conservation Covenant Plans*

## 4.4 Cadastral survey guidelines

A new guideline to the Rules for Cadastral Survey 2010 will be published prior to the commencement of the new Rules. The purpose of the guideline will be to:

- explain the content of the new Rules and the relationships between related rules
- provide interpretation of the rules, such as their applicability in certain situations
- include some guidance on the differences between the Surveyor-General's Rules 2002/2 and the 2010 Rules.

The new document will not:

- provide a guide to survey practice (*how* to undertake a survey to meet the Rules)
- include LINZ requirements for the preparation of a CSD for lodgment, processing and integration of the survey into the cadastre via Landonline. These details will be available through the Landonline website, [www.landonline.govt.nz](http://www.landonline.govt.nz) and via Customer Support, 0800 665 463.

Consequently, the new guideline will be significantly different from the familiar *Cadastral Survey Guidelines* which have been unsupported since 2004 and have been watermarked "CAUTION: May Not Be Current".

The *Cadastral Survey Guidelines* will be re-watermarked to state that they have been superseded, and will then be available for historical reference only.

# 5. Compliance expectations and dispensations

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The new Rules have been derived from a risk-based approach. This approach has determined the appropriate level of intervention (ie whether a rule is required or not) in relation to the cadastral objectives and sub-objectives, including the essential elements required for updating of the cadastre, and for the creation and administration of land rights.

As a result of this approach to regulation, surveyors will be expected to comply with all the requirements of the new Rules.

Dispensations (under s47(5) of the Cadastral Survey Act 2002) are intended to be granted only where:

- there is sound argument that in a particular case, the objectives and sub-objectives of the cadastre can still be met, or
- there are exceptional circumstances not covered by the Rules.

# 6. *e-survey* requirements

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In parallel with the Surveyor-General's responsibility to set the Rules for Cadastral Survey, the Chief Executive of LINZ is required to determine whether CSDs comply with the Rules, and to integrate new cadastral surveys into the cadastre. This means that when lodging CSDs with LINZ, surveyors have to comply not only with the Rules, but with additional LINZ requirements that:

- enable LINZ to assess compliance of CSDs
- allow the use of the supporting systems (primarily Landonline)
- allow for the effective integration of surveys into Landonline.

Compliance with these requirements and procedures will largely be met by surveyors working within the functionality of Landonline.

## 6.1 Changes to Landonline

The Landonline processes for capture, plan generation, and validation will largely remain the same with the introduction of the new Rules. Changes will be made to Landonline to ensure it is compatible with the new Rules.

Examples of this are the new accuracy tolerances required in a validation test, or the new wording required in the signing certification template.

These changes will be implemented as part of the normal Landonline release programme, and are scheduled to be included in Release 3.4, which will be introduced at the same time as the new Rules.

# 7. Transitioning from the current Rules to the new Rules

On previous occasions when there have been changes to the Rules, surveys which had commenced under the old Rules were allowed to be completed in terms of those Rules after the new Rules came into effect. However because of the way that Landonline operates, it is not practical to run two sets of Rules at the same time, even for a short period. The costs of the required system changes would be prohibitive and far outweigh the benefits.

Consequently Landonline will be changed to move from the current Rules to the new Rules “overnight”, at the date when the new Rules formally come into effect. Prior to the switch, Landonline will only be able to capture and validate CSDs in terms of the current Rules, and after the switch the capture and validation will only be in terms of the new Rules. Any CSDs that are part way through capture or processing at the time of the switch could therefore be significantly affected. This would include CSDs out on requisition.

Options for the capture and processing of CSDs affected by the transition (including those under requisition at the time the new Rules come into effect) are still to be developed. These options will need to ensure that the certifications are still valid while minimising any undesirable impacts on survey capture and processing (including potentially re-capturing and re-processing). LINZ will consult with the survey profession to manage the transition in the most effective manner.

Publication of the new Rules and this document have been carried out well in advance to allow survey practitioners to start undertaking surveys in terms of the new Rules if they might be lodged close to or after the implementation date. Further information about the transition and the processes for affected surveys will be provided as it is developed.

The exact commencement date of the new Rules will be advised once the date of Landonline Release 3.4 is known.

## 7.1 Preparing a survey for lodgement near the implementation date

When starting a new survey before May 2010, surveyors should assess whether it can be fully completed (field work, *e-survey* capture, lodgement and approval) under the current Rules or whether they should plan for it to be lodged under, and comply with, the new Rules. Surveyors will need to decide if the CSD:

1. will definitely be lodged **before** the new Rules come into effect. These can continue to be prepared and submitted as usual in terms of the current Rules, or
2. will definitely be lodged **after** the new Rules come into effect. These will need to comply with the new Rules, or
3. might be lodged either **before or after** the new Rules come into effect. In this case, surveyors can take some steps that should help ensure that a survey that complies with the current Rules might also comply with the new Rules. These steps should minimise any changes that might need to be made if the CSD is not lodged as planned.

Appendix A gives a preliminary indication of such steps.

## 7.2. Dispensations during transition

Any dispensation or Ruling provided under the current SG Rules 2002/2 will lapse for CSDs that have not been lodged by the time that the new Rules come into effect. The surveyor may wish to apply for a new dispensation from the new Rules if the situation for which the dispensation was originally granted is not accounted for in the new Rules or associated Rulings.

Dispensations from the new Rules may be sought prior to the date that the new Rules come into effect. More guidance about the management of dispensations will be provided closer to the date that the new Rules come into effect.

# 8. Supporting material and reference documents

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This document is intended to provide an overview and introduction to the new Rules. Additional material that is either already available, or will be made available on the LINZ or Landonline websites to assist with the transition to the new Rules includes:

- Rules for Cadastral Survey 2010 (which will also be distributed at the upcoming seminars)
- New Rulings, in terms of the Rules for Cadastral Survey 2010
- Guidelines to the Rules for Cadastral Survey 2010
- Question and Answers on the Implementation of the Rules for Cadastral Survey 2010
- Updated Landonline user guides.

# Appendix A – Steps to help ensure that a survey in terms of the current Rules also complies with the new Rules

Where it is unclear whether a CSD might be lodged under the current Rules or the new Rules, surveyors can take some steps that should help ensure that a survey that complies with the current Rules also complies with the new Rules. This approach should minimise any changes that might need to be made if the CSD is not lodged as planned.

<b>Witnessing accuracy</b>	Ensure that ALL non-boundary marks within the new witnessing distances (rule 7.3.2(a)) meet the witnessing accuracy requirements (rule 3.6), and that the CSD includes sufficient vectors to validate this (rule 8.1).
<b>Adoption accuracy</b>	Ensure that existing boundaries that do not comply with the applicable accuracy standards (and which are acceptable under current rule 26(3)) are defined by survey.
<b>Accuracy of water and irregular boundaries</b>	Ensure that new and existing water boundaries and irregular boundaries are sufficiently accurate (rule 3.4 ).
<b>Class II surveys</b>	If a class II boundary would be class A under the new Rules, ensure it meets the tighter class A accuracy standards and witnessing requirements.
<b>Horizontal connection</b>	Ensure that a field survey is connected to an order 6 or better mark if one exists within the specified distances of a boundary mark (500m for class A, 1000m for class B – rule 4.2).
<b>Vertical datum</b>	Ensure that a field survey is in terms of an official vertical datum if an order 3V or better mark exists within the specified distances of a heighted boundary mark (200m for class A, 500m for class B – rule 4.3).
<b>Witness marks</b>	Ensure that four witness marks are included in applicable surveys that include class B or C boundaries (rule 7.3.2(b)).
<b>Permanent reference marks</b>	Include two marks that meet the PRM requirements, especially for longevity (rule 7.4). If lodged in terms of the current Rules, these marks could be used as witness marks if they also meet the distance criteria (125m for class A, 250m for class B).
<b>Old water and irregular boundaries</b>	Right-line old water and irregular boundaries where specified (rules 6.6 and 6.7), and monument if class A (rule 7.1(c)).
<b>Boundary marks</b>	Ensure that a boundary mark that is not a traditional peg or a post is labelled as a boundary mark, unless impractical (rule 7.2(a)).
<b>Old mark (no record)</b>	Do not treat an “old mark (no record)” as an old mark.
<b>Balance legalisation parcels</b>	Account for all of the extinguished parcel in the case of land to be acquired under the Public Works Act 1981 (rule 5.1).
<b>Non-primary parcel crossing</b>	Ensure that tertiary parcels are split where they cross primary parcel boundaries (rule 5.2).

<b>Appellations</b>	<p>The new parcel identifier formats (rule 5.5.4) should be used in applications for resource consents.</p> <p>CSDs should use the “Area” parcel type for easements, covenants, and leases, rather than “marked”, “shown”, or “easement” (rule 5.5.2).</p>
<b>Defining all boundaries</b>	<p>Ensure that all class A boundaries on a primary parcel less than 0.4ha are defined by survey rather than defined by adoption (rule 6.2(a)(iv)).</p>
<b>Units and flats</b>	<p>Ensure that permanent structure boundaries (flats and units) meet the related requirements (rules 6.9 and where applicable 3.5). Permanent structures must satisfy the specified criteria – eg not fences and kerbs.</p>
<b>Vectors to water boundaries</b>	<p>Include at least two vectors to the ends of every water boundary in the CSD (rule 9.6.13(c)).</p>
<b>Occupation</b>	<p>Ensure that the full extent of occupation is assessed (see definition).</p>

Once further input has been obtained through consultation with the survey profession, an updated version of this list will be published separately for use by surveyors.

# Appendix B – Changes made to the proposed Rules (published for consultation in 2007)

The following table outlines the major changes made to the Proposed Rules that were presented for consultation in October 2007. It does not outline the changes from the current 2002/2 Rules. The table does not cover all the changes or the requirements in detail.

<p><b>Accuracy standards</b></p>	<ul style="list-style-type: none"> <li>• The accuracy standards have been made more stringent.</li> <li>• The proposed boundary accuracy and survey accuracy standards used RSS based formula. The Rules now incorporate two formulae: one using RSS for new work (95% confidence); and a less stringent standard using a straight sum for all work (new and adopted).</li> <li>• For water boundary and irregular boundaries, mathematical accuracies have been replaced with assessment criteria.</li> <li>• Parcel area accuracies no longer relate to the true area but are related to a correct calculation from the boundary information. The lower standard of accuracy for a parcel that includes a water or irregular boundary has also been removed.</li> </ul>
<p><b>Datum</b></p>	<ul style="list-style-type: none"> <li>• A requirement to connect to horizontal datum marks (6th order) has been introduced (subject to the proximity of these marks).</li> <li>• The distance requirement to connect to vertical datum marks has been relaxed in the case of class B.</li> </ul>
<p><b>Boundary marking</b></p>	<ul style="list-style-type: none"> <li>• Boundary marking becomes the norm rather than the exception, but only for land held under the Land Transfer Act 1952.</li> <li>• The type of boundary mark is more prescribed.</li> </ul>
<p><b>Witnessing</b></p>	<ul style="list-style-type: none"> <li>• The maximum distance permitted between a witness mark and boundary point has been reduced for class A boundary points.</li> <li>• A maximum distance between a witness mark and class C boundary point has now been specified (for use when class C is made available for new survey work by dispensation).</li> <li>• Increased witnessing distances can be used for “extensive rural boundary” points.</li> </ul>
<p><b>CSD recording the placement of a boundary mark</b></p>	<ul style="list-style-type: none"> <li>• Monumentation CSD use has been extended to include boundary points depicted on suitable <i>pre-e-survey</i> plans.</li> <li>• The time between mark placement and the requirement for CSD lodgement has been increased from three months to six months.</li> <li>• Where boundary points are marked more than once within 6 months, a CSD is required to record only the final placement.</li> </ul>

<b>Parcels</b>	<ul style="list-style-type: none"> <li>• The limit for very narrow parcels has been increased from 0.05m to 0.10m in class A or 0.20m in other classes.</li> <li>• The “Building Area” parcel type has been removed and incorporated into the “Area” parcel type.</li> <li>• “Secondary parcels” are now named “non-primary” parcels.</li> </ul>
<b>Retention of data</b>	<ul style="list-style-type: none"> <li>• The period of retention of relevant field data has been extended from five years to seven years.</li> </ul>
<b>Boundaries</b>	<ul style="list-style-type: none"> <li>• Boundaries must be either “defined by survey”, “defined by adoption” or “accepted” – the criteria for each has been specified.</li> <li>• A “surveyor’s duty when defining a boundary by survey” has been introduced.</li> <li>• Dried up water boundaries must be right-lined in certain cases, and monumented in some of those cases.</li> </ul>
<b>Cadastral survey datasets and plans</b>	<ul style="list-style-type: none"> <li>• The Survey Report has been reinstated.</li> <li>• “Measured” and “calculated” are no longer defined – the distinction is left to the surveyor to specify. There is no requirement to include the vectors that have been measured – calculated vectors may be used.</li> <li>• Sufficient vectors to determine spatial relationship between all marks and points must be shown on the diagram of survey, and not just able to be tabulated in the CSD plan.</li> <li>• The diagram of survey in the CSD plan must be legible when printed at A3 size.</li> <li>• The diagram of parcels in the Title Plan must be legible when printed at A4 size.</li> <li>• Symbology is now specified for new, old and adopted boundary posts.</li> <li>• Hierarchy of line weights and font sizes are now provided instead of specifying sizes in millimetres.</li> <li>• Symbols for adopted and calculated lines have been modified.</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>• The section referring to “all other relevant enactments and rules of law” has been deleted from the certification.</li> <li>• The clause that allowed surveys where the field work was already completed to be continued in terms of the current Rules has been removed.</li> </ul>