Toitu te whenua
Land Information New Zealand

Interpretation guide to Rules for Cadastral Survey 2010

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Terms and definitions

Introduction

For the purposes of this guideline, the following terms and definitions apply.

Term / abbreviation	Definition
accept	in relation to a boundary, means to adopt a boundary and boundary points where permitted by rule 6.3 of the Rules for Cadastral Survey 2010 and not have to comply with an accuracy standard. 'Acceptance' and 'accepted' have corresponding meanings.
adopt	to incorporate in a CSD information from a prior CSD that has already been integrated into the cadastre or, in the absence of suitable CSD information, from an estate record held by the tenure system manager. 'Adoption' and 'adopted' have corresponding meanings.
approved CSD	a CSD which has been approved as being in terms of cadastral survey rules or regulations, and excludes those lodged only for recording purposes
arc boundary	a boundary that follows part of the circumference of a circle
balance non-primary parcel	the portion of an easement or covenant parcel that is intended to remain after a part has been surrendered
balance parcel	the portion of one of the following primary parcels that is intended to remain after a part has been removed by survey: (a) a railway parcel that is not in a computer freehold register, or (b) a road parcel, or (c) a fixed marginal strip parcel, or (d) the bed of a lake, river, stream, or the sea
boundary mark	a cadastral survey mark positioned at a boundary point
boundary point	a uniquely identified point on a parcel boundary, whether marked or unmarked
boundary reinstatement survey	(a) a survey that places one or more boundary marks at boundary points already defined in an approved CSD, where: (i) the boundary points are not required by rules 6.2(a)(vi) or (vii) of the Rules for Cadastral Survey 2010 to be defined by survey; and (ii) the survey does not create a new parcel (b) a survey that places a boundary mark on an existing line
cadastral survey dataset	a set of cadastral data necessary to integrate a cadastral survey into the cadastre (refer s 4 of the Cadastral Survey Act 2002)

cadastral survey network mark	a survey mark of a class specified by the Surveyor-General as suitable for the connection of a cadastral survey to the national survey control network
cadastre	all the cadastral survey data held by or for the Crown and Crown agencies (refer s 4 of the Cadastral Survey Act 2002)
centreline easement	an easement which is spatially represented by one or more lines along its centre
CFR	computer freehold register
conflict	a difference that exceeds the applicable accuracy standards: (a) between the estate boundary and the boundary recorded in a CSD integrated into the cadastre, or (b) between the same boundary as recorded in different CSDs integrated into the cadastre, or (c) between the same boundary as recorded in a CSD integrated into the cadastre and other evidence including field evidence (d) and which has not been resolved by one or more CSDs already integrated into the cadastre
CSD	cadastral survey dataset
CSD Plan	a plan as specified in rule 9 or rule 11 of the Rules for Cadastral Survey 2010
defined by adoption	an existing boundary or boundary point that is not defined by survey or accepted
defined by survey	a boundary defined in terms of rule 6.1 of the Rules for Cadastral Survey 2010
disturbed	in relation to an old survey mark, means that the mark is in a position different from that originally placed
esplanade strip	as defined in s 2 of the Resource Management Act 1991
estate boundary	the boundary of an estate recorded in a tenure system for: (a) a fee simple estate, or (b) Māori freehold land, or (c) Māori customary land, or (d) land of the Crown (including gazette boundaries), or (e) a stratum estate, or (f) a leasehold estate
extensive rural boundary point	a class B boundary point in a rural area where each new primary parcel that includes that point has an area of more than 500 ha or is intended to be in a title with a total area of more than 500 ha
extinguished	in relation to a parcel means no longer available for the assignment of rights
fixed marginal strip	a marginal strip under s 24(3) of the Conservation Act 1987

GNSS	global navigation satellite system
Hawke's Bay interim title	a certificate of title issued under s 6 or s 8 of the Land Transfer (Hawke's Bay) Act 1931
higher class	a class of accuracy which has more precise tolerances than another; for example, class A is higher than class B, which is higher than class C
irregular boundary	a boundary that is depicted as an irregular line but does not include a water boundary
irregular line	a line consisting of a series of connected vertices that are usually irregularly spaced and not on a single alignment
LTA	Land Transfer Act 1952
limited title	a computer freehold register that is limited as to parcels.
lower class	a class of accuracy which has less precise tolerances than another; for example, class C is lower than class B, which is lower than class A
MACAA	Marine and Coastal Area (Takutai Moana) Act 2011
Māori customary land	as defined in s 4 of the Te Ture Whenua Māori Act 1993
Māori freehold land	as defined in s 4 of the Te Ture Whenua Māori Act 1993
marginal strip	as defined in s 2 of the Conservation Act 1987
MHWM	mean high water mark
MHWS	mean high water springs
monumentation CSD	a CSD that records the placement of one or more boundary marks in accordance with rule 11 of the Rules for Cadastral Survey 2010
movable marginal strip	a marginal strip as defined in s 2 of the Conservation Act 1987 except those created under s 24(3) of that Act
non-boundary mark	a survey mark which is not on a boundary point
non-primary parcel	any parcel that is not a primary parcel and includes the following examples: (a) an easement, including an esplanade strip or an access strip, (b) a covenant, (c) a lease or an area associated with a lease, (d) a licence or a permit area, (e) a unit or common property for the purposes of the Unit Titles Act 2010, (f) a movable marginal strip, and (g) a roadway or a restricted roadway that is an encumbrance over a primary parcel
occupation	the physical features that describe the extent of an occupier's use of land

official geodetic datum	a geodetic datum approved by the Surveyor-General and in force at the time of survey
official geodetic projection	a projection in terms of an official geodetic datum approved by the Surveyor-General for use in a specific area and in force at the time of survey
official vertical datum	a vertical datum approved by the Surveyor-General and in force at the time of survey
old boundary mark	a boundary mark that is an old survey mark
old survey mark	a survey mark measured to on the survey which is from the national survey control system or from a CSD that has already been integrated into the cadastre
parcel	an area or space that is a single contiguous portion of land separately identified in a CSD or in the integrated cadastre
parcel intent	a description of a right or interest intended to be assigned to a parcel
permanent structure	a building or recognisable physical structure that is likely to remain undisturbed for 50 years or more
permanent structure boundary	a boundary related to a permanent structure in accordance with rule 6.9 of the Rules for Cadastral Survey 2010
primary parcel	any parcel that is intended to be: (a) owned by the Crown (including land to be vested), with the exception of a movable marginal strip parcel, (b) held in fee simple, (c) Māori freehold land or Māori customary land, (d) Common marine and coastal area (previously referred to as 'public foreshore and seabed', (e) the bed of a lake or river, (f) road or railway, or (g) vested in a local authority
PRM	a permanent reference mark in accordance with rule 7.4 of the Rules for Cadastral Survey 2010
reduced level	a height in terms of a vertical datum
reinstated	means a new survey mark has been placed in the position of a previous survey mark that has not been found
renewed	means a new survey mark has been placed in the same position as an old survey mark that has been found

residue parcel[1]	the portion of a primary parcel not being claimed and which remains after part of that primary parcel is removed as a result of a survey that is: (a) intended to remove its limitations as to parcels, or (b) claiming adverse possession, or (c) changing the registration of land from the Deeds Registration Act 1908 to the Land Transfer Act 1952 (d) erosion (e) common marine and coastal area (f) lakebed and riverbed to be excluded from title
right-line boundary	a boundary that follows the shortest distance between two boundary points
Rules	Rules for Cadastral Survey 2010
stratum boundary	a boundary, not being a permanent structure boundary, that defines the upper or lower extent of a parcel
survey mark	a cadastral survey mark or a mark used for the national survey control system (refer s 4 of the Cadastral Survey Act 2002)
SO	survey office
Title Plan	a plan as specified in rule 10 of the Rules for Cadastral Survey 2010
underlying parcel	the parcel, whether primary or non-primary, whose interests are or will be directly affected or encumbered by a non-primary parcel
vector	a bearing and distance between two points
vertical control mark	a survey mark in the national survey control system and being a class of mark specified by the Surveyor-General as suitable for the vertical control of cadastral surveys
water boundary	a boundary set at the landward margin of: (a) a river bed or a stream bed, (b) a lake bed, or (c) Common marine and coastal area (previously referred to as the foreshore or seabed) and includes a natural boundary where this term is used in enactments

[1] text to clarify application of new legislation

Foreword

Introduction

This interpretation guide to the Rules for Cadastral Survey 2010 is issued under the authority of the Surveyor-General, who has responsibility for setting standards for the conduct of cadastral surveys, specifications, and guidelines in accordance with legislation and departmental policy.

Purpose of guideline

The purpose of this interpretation guide is to:

- supplement the Rules for Cadastral Survey 2010 (Rules), the Cadastral Survey Act 2002, and other legislation relating to cadastral surveys, and
- facilitate correct interpretation of the Rules.

Scope

This document:

- provides an explanation of new terms introduced in the Rules,
- provides an explanation of terms where the Rules require a common word to be interpreted in a different or more precise manner,
- links together related rules and provides examples to aid interpretation of the Rules, and
- highlights differences between the requirements under the Rules and previous regulatory requirements or past practices.

This document does not provide a guide:

- to survey practice,
- on how to capture and process a cadastral survey dataset within the Landonline environment, or
- to the pre-validation and validation process used by LINZ.

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Foreword, continued

Intended use of interpretation guide

This interpretation guide is intended for use by licensed cadastral surveyors and those working under their direction when conducting a cadastral survey and lodging a cadastral dataset with LINZ.

All the Rules not covered

This interpretation guide is not a complete interpretation of every rule. It only deals with those points where clarification is considered necessary.

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References

The following references are necessary for the application of this guide:

- LINZ 2010, *LINZS65000: Rules for Cadastral Survey 2010*, Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZS65001 Rules for Cadastral Survey (Canterbury Earthquake) 2010* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65300: Ruling on official geodetic datum and projections,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65301: Ruling on official vertical datums,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65302: Ruling on cadastral survey network marks,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65303: Ruling on vertical control marks,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65308: Interim ruling on survey requirements for open space covenants,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZG65701: Interpretation guide to interim ruling on survey requirements for open space covenants,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65309: Ruling allowing a survey that places a boundary mark on an existing line to be a boundary reinstatement survey,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65311: Ruling to allow permanent structure boundaries to be used for rights under the Unit Titles Act 2010,* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2010, *LINZR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b),* Office of the Surveyor-General, LINZ, Wellington
- LINZ 2011, *LINZR65314: Ruling to enable more boundary reinstatement surveys to be recorded on monumentation CSDs,* Office of the Surveyor-General, LINZ, Wellington

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References relevant for application

The following references are relevant in the application of this guideline:

- Cadastral Survey Act 2002
- Marine and Coastal Area (Takutai Moana) Act 2011
- Resource Management Act 1991
- Public Works Act 1981
- Unit Titles Act 2010
- Walking Access Act 2008
- Surveyor-General's *Advisory notes* [www.linz.govt.nz]
- LINZ 2007, *LINZG20710: Guideline for dry stream or river bed claims,* Registrar-General of Land, LINZ, Wellington
- LINZ 2007, *LINZG20711: Guideline for accretion claims,* Registrar-General of Land, LINZ, Wellington
- LINZ 2011, LINZG20720*: Interim guideline for Unit Titles Act 2010,* Registrar-General of Land, LINZ, Wellington
- LINZ 2010, *LINZG65702: Guideline for Rules for Cadastral Survey (Canterbury Earthquake) 2010,* Office of the Surveyor-General, LINZ, Wellington
- Department of Conservation 2008, *DOCDM* – 192684: *The Identification of Water Bodies that will qualify for Marginal Strips,* Department of Conservation, Wellington

Versions and amendments

Sequence	Amendments to ***Interpretation guide to Rules for Cadastral Survey 2010***	Published
1	Part 1 Rules 1-7, 13-15, and dispensations (version 1.0)	18/12/2009
2	Part 1 Rules 1-7, 13-15, and dispensations (version 2.0) Part 2 Rules 8-12 (version 1.0)	20/05/2010
3	Interpretation Guide [incorporating Parts 1 and 2 into a single document with updated material] (version 1.0)	02/12/2010
4	Interpretation Guide (version 2.0): current version *Significant changes indicated by footnotes*	06/12/2011

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Superseded documents

This interpretation guide supersedes:

- the Cadastral Survey Guidelines and the Cadastral Survey Guidelines for e-survey.
- Part 1 and Part 2 Interpretation guide to Rules for Cadastral Survey 2010

Accuracy standards

1. Overview

Introduction to all accuracy standards

Accurate spatial relationships between survey points are essential. These enable users of survey information to have confidence in the size and shape of parcels of land and surveyors to correctly reinstate existing boundary positions in the future.

This chapter explains the rules that specify the accuracy of:

- the network of non-boundary survey marks,
- non-boundary marks and boundary points in their close proximity, and
- the network of boundary points.

Links to all accuracy standards in guide

This chapter contains the following sections:

Survey accuracy

2. Overview

Introduction to the survey accuracy standard

It is essential that there is an accuracy framework that specifies the accuracy of a boundary position. This enables this same position to be correctly reinstated in the future.

This section explains the rules that specify the accuracy between:

- non-boundary marks, and
- non-boundary marks and boundary points.

Links to the survey accuracy standards in the guide

This section contains the following topics:

3. Accuracy of non-boundary marks

Rules and ruling relating to the accuracy of non-boundary marks

3.1 Accuracy of non-boundary survey marks

LINZR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b)

Two tiers and a cap for accuracy of non-boundary marks

The standard for survey accuracy [r 3.1] specifies two tiers of accuracies and a cap that applies between non-boundary marks. These are:

- a more stringent level of accuracy to be met between 95 % of new marks (a 95 % confidence level) [r 3.1, Table 1(a)],
- a less stringent level of accuracy to be met between all marks including cadastral survey network marks, but exempts other adopted non-boundary marks (100 %) [r 3.1, Table 1(b)], and
- a 0.5 m cap [r 3.1, Table 1(c)].

More stringent standard for accuracy of non-boundary marks

This first tier is more stringent and requires a **95 % likelihood** that the relationship between the marks specified in the rules meets the specified accuracies. This 95 % standard applies to all new work but not to adopted work. The standard uses the root sum squared (RSS) method to calculate the accuracy value [r 3.1, Table 1(a)].

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Accuracy of non-boundary marks, continued

Less stringent standard for accuracy of non-boundary marks

- This second tier is less stringent with tolerances approximately 50 % greater than the most stringent standard.
- The standard requires the relationship between all **(100 %)** of the points specified in the Rules, including all adopted cadastral survey network marks to meet the specified standards. Other adopted non-boundary marks are exempt (refer to *LINZR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b)*). A cadastral survey network mark is a mark with a Landonline order 6 or better (*LINZR65302: Ruling on cadastral survey network marks)*.
- The standard uses a simple sum method to calculate the accuracy value [r 3.1, Table 1(b)].
- This means that up to 5 % of the relationships between new work are permitted to be outside the more stringent accuracy standard providing they are within the less stringent standard.

0.5 metre cap for accuracy of non-boundary marks

The accuracy standard has a cap of 0.5 m, which has an impact on widely spaced marks [r 3.1, Table 1(c)].

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Accuracy of non-boundary marks, continued

Application of accuracy standards for accuracy of non-boundary marks

The accuracy standards are distance dependent. Note that the cap comes into effect at 3130 m.

Figure 1: Accuracy between non-boundary marks

Meeting the accuracy levels for accuracy of non-boundary marks

- Confidence levels can be estimated through a least squares analysis and are influenced by the number, and location of the vectors connecting the points (the strength of the geometry) and the accuracy of those vectors. Good survey practice, strong geometry, accurate measurement, and the inclusion of additional vectors may provide assurance the required confidence levels are met.
- Note that where circuits include new and adopted vectors, the circuit closure may not be a definitive indicator of the survey meeting the accuracy levels. This is because of the different accuracy specifications in rules 3.1(a) and 3.1(b).

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Non-boundary marks which accuracy tolerance applies to

With the exception of those adopted non-boundary marks specified in *LINR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b)*, the accuracy specifications apply to all new and old non-boundary marks including:

- permanent reference marks (PRMs),
- witness marks, and
- old or adopted cadastral survey network marks
- other non-boundary marks in the survey (traverse marks).

When survey accuracy standard applies

The standard applies between specified non-boundary marks:

- joined by measured vectors,
- joined by adopted vectors (for exceptions refer to Less stringent standard for accuracy of non-boundary marks above),
- joined by calculated vectors, and
- not directly joined by vectors.

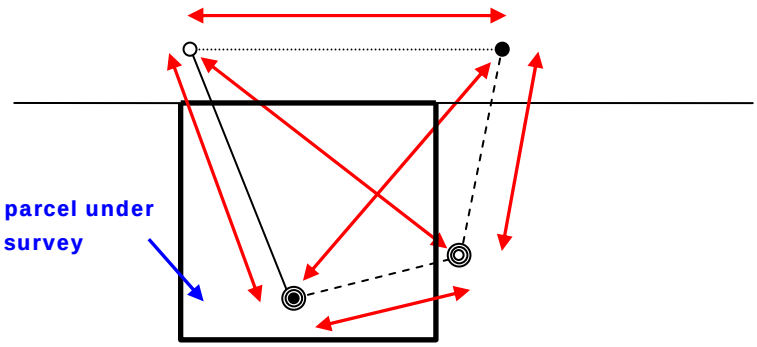

Figure 2: The accuracy standard applies between all marks

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Accuracy of non-boundary marks, continued

Adopted vectors and accuracy of non-boundary marks

- All adopted vectors that define the spatial relationship between cadastral survey network marks or between boundary points must comply with the less stringent accuracy standard [r 3.1, Table 1(b)]. There is no provision for allowing the adoption of vectors that fail the new accuracy standards, but meet the survey accuracy tolerances in place at the time of the original survey.

- Where adopted 'traverse' vectors are used as evidence in locating an existing boundary point, they are not required to meet the accuracy standards in rule 3.1 [r 9.6.13(d) and *LINZR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b)*]. An example could be an old centreline traverse.

- These vectors must be copied correctly from the source data into the CSD [r 8.4] and be included in the Diagram of Survey noting that an adoption may incorporate a bearing adjustment [r 8.4][2].

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[2] text changed to clarify interpretation of rule 8.4

Accuracy of non-boundary marks, continued

Effect of accuracy standards for accuracy of non-boundary marks

The accuracy requirements for non-boundary marks [r 3.1], in combination with the accuracy requirements for witnessing [r 3.6], ensures there is a survey accurate relationship between the boundary point and non-boundary marks that are in close proximity. This enables a boundary point to be confidently reinstated from any one of these non-boundary marks in the future.

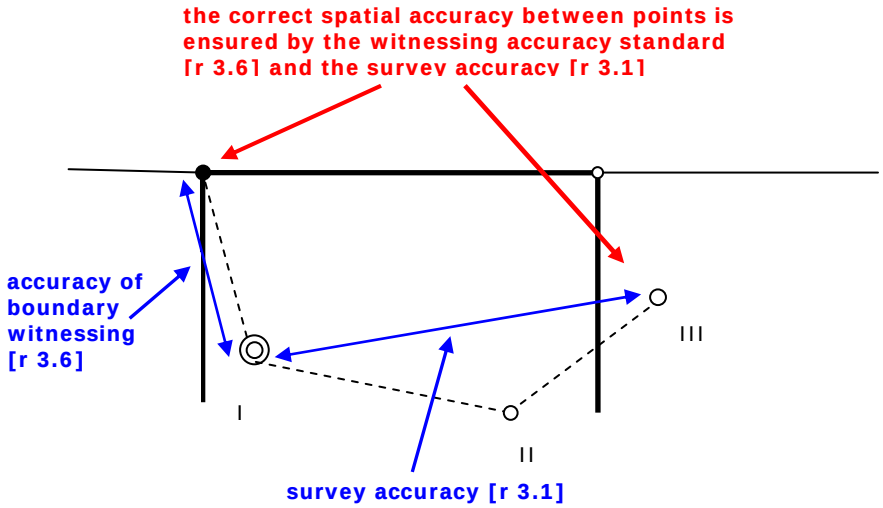

Figure 3: Ensuring correct spatial accuracy between points

Class of survey does not apply for accuracy of non-boundary marks

There is no specified class of accuracy for the survey accuracy standard. The same accuracies apply irrespective of the class of accuracy applicable to boundary witnessing [r 3.6] and boundaries [r 3.3].

4. Accuracy of boundary witnessing

Rules relating to the accuracy of boundary witnessing

3.6 Accuracy of boundary witnessing

Boundary witness accuracy applies to boundary points and stratum boundaries

- The horizontal and vertical accuracy between a witnessed boundary point and all old and new non-boundary marks within the distances specified in rule 7.3.2 must not exceed the tolerances in rule 3.6.
- The accuracy tolerances apply to boundary points that define both the horizontal extent of primary parcels and the vertical extent of primary and non-primary parcels in the case of a stratum boundary.

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Boundary witness accuracy applies to all close non-boundary marks

- The accuracy of boundary witnessing [r 3.6] applies between a boundary point and all non-boundary marks fixed in the field that are within the distances specified by rule 7.3.2.
- This includes those marks without a direct connection to the boundary point and in some cases does not include the mark used to set out or tie to the boundary mark.

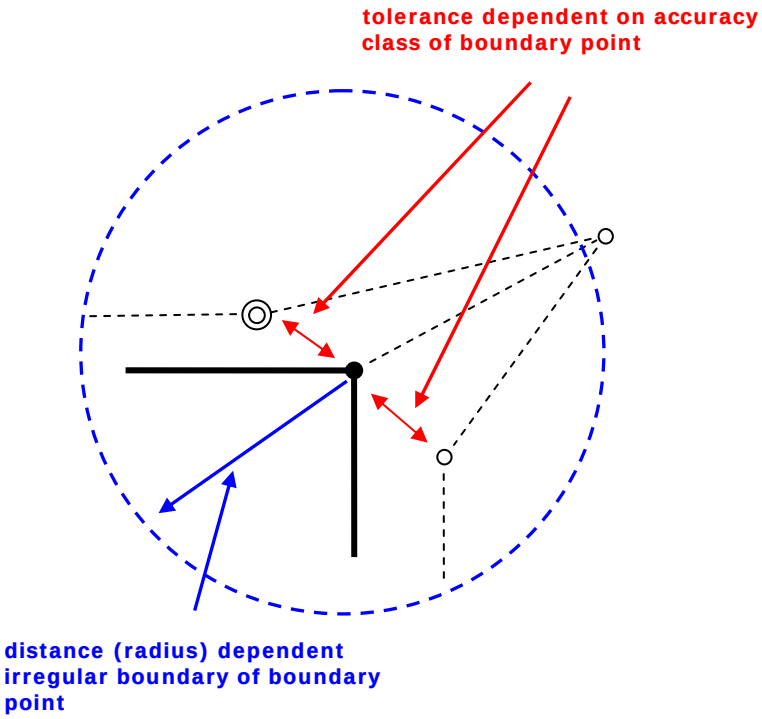

Figure 4: Distance (radius) and tolerance depend on accuracy class of boundary point

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Boundary witness accuracy and primary parcels less than 0.4 ha

In the case of a class A primary parcel being subdivided, for a resultant parcel **less than 0.4 ha** the accuracy of boundary witnessing standard applies to new boundary points (as indicated in blue in the diagram) and also to the **existing boundary points** (as indicated in red). This is because rule 7.3.1(a) requires every boundary point on a primary parcel that is being defined by survey, to be witnessed, and all boundary points for a parcel less than 0.4 ha to be defined by survey [r 6.2(a)(iv)].

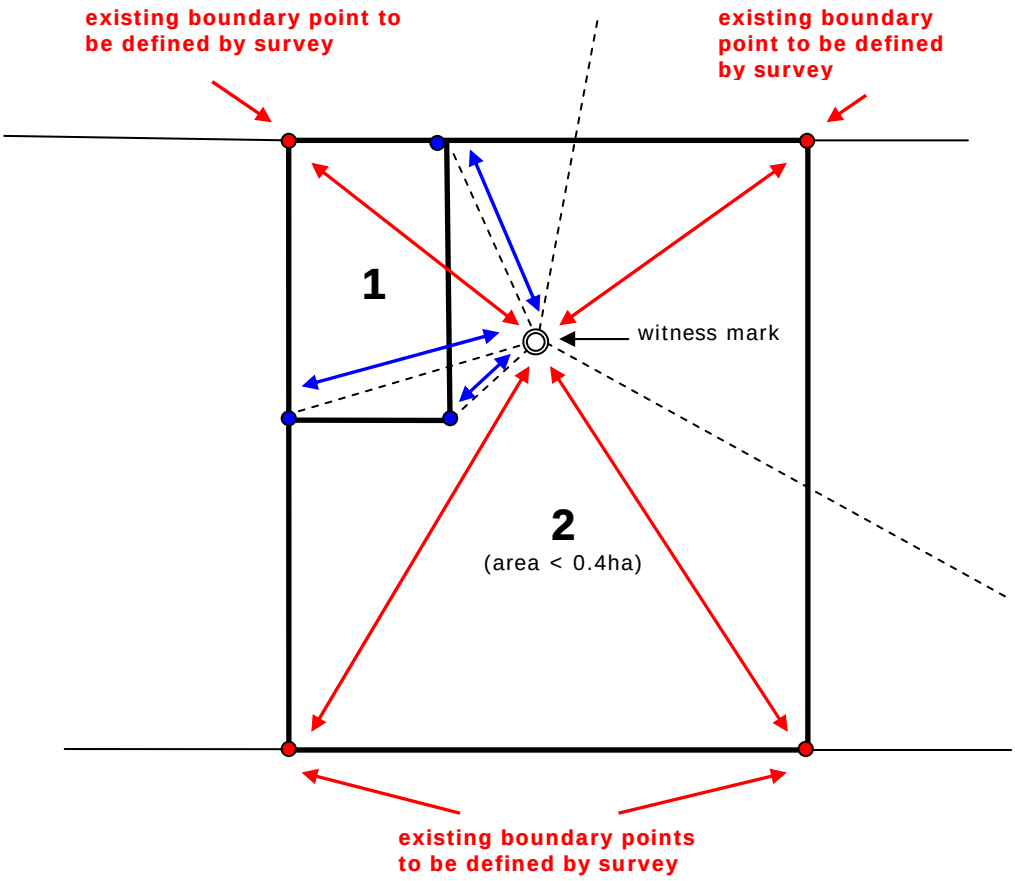

Figure 5: Accuracy standard applies to new and existing boundary points for new class A parcels less than 0.4 ha

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Effect of boundary witness accuracy standards

- The Rules emphasise the accuracy of a boundary position in relation to both witness marks and other non-boundary marks within the specified distances in rule 7.3.2. This enables the boundary point to be confidently reinstated from any one of these marks in the future.
- Note the CSD is required to include sufficient vectors to ascertain and verify the relationships between the non-boundary marks and the boundary point [r 8.1(d)(iii)].

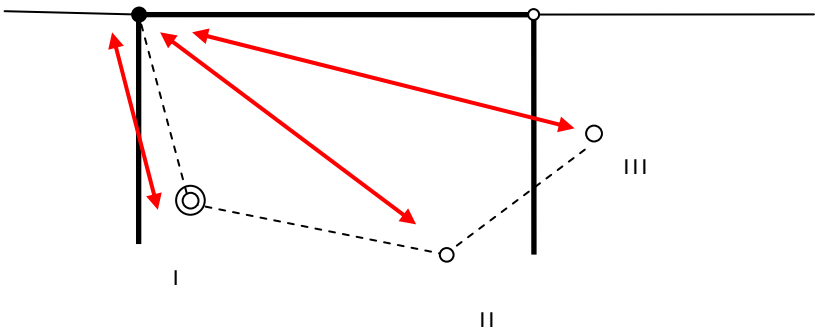

Figure 6: The boundary point is able to be reinstated from any of the non-boundary marks

Accuracy of boundaries

5. Overview

Introduction to the boundary accuracy standards

It is essential that there is an accuracy framework that specifies the accuracy of a boundary point in relationship to other boundaries and boundary points.

This section explains the rules that specify the accuracy of the relationship between all types of boundaries and boundary points.

Links to all boundary accuracy standards in guide

This section contains the following topics:

6. Classes of accuracy

Rules relating to boundary accuracy

3.2 Accuracy class of boundaries

3.3.2 Accuracy sufficient to avoid overlap

Historical classes of boundary accuracy

- Historically, classes of accuracy were assigned to parcels and not boundaries. The assignment of some classes of survey was made on parcel size (that is, greater or less than 4 ha) which could result in anomalies. For example a small piece of land being taken for road in a rural environment required the more stringent urban class of accuracy. This is no longer applicable.
- Classes of accuracy are now assigned to boundaries and boundary points and the criterion for increasing the accuracy class of survey in a rural area is now based on specific land use (intensive commercial, industrial, or residential purposes).

Hierarchy of boundary accuracy

The Rules provide four classes of accuracy which apply only to boundaries and boundary points. The four classes are defined in rule 3.2 as:

- class A (urban and the most accurate),
- class B (rural and not as accurate as class A),
- class C (used in specified rural circumstances where a less accurate boundary is acceptable), and
- class D (used in exceptional rural circumstances where the existing boundary accuracy is unknown or unable to be determined and it is appropriate to permit these inaccuracies to remain).

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Classes of accuracy, continued

Accuracy class applies to boundary, not parcel[3]

A class of accuracy applies to a boundary and its associated boundary points rather than to a parcel [r 3.2]. To illustrate this concept, refer to Right-line and arc boundary accuracy for rural parcels abutting class A parcels below where a rural lot adjoins a residential lot and the rural lot will be made up of a mixture of class A and class B boundaries.

When class A or class B boundary accuracy applies

- Class A is to be applied in an urban area and also in a non-urban situation where the boundaries and boundary points are associated with a parcel intended for intensive commercial, industrial, or residential purposes [r 3.2.1(b)].
- Where there could be doubt as to whether a boundary should be class A or B, the surveyor will need to decide and, if class B is chosen, provide supporting information in the survey report to support the decision.
- Any boundaries or boundary points may be surveyed to class A accuracy if the surveyor chooses to do so.
- Boundaries 'defined by survey' must be class A or class B unless a lower accuracy class is approved by the Surveyor-General [r 3.2.5(b)].

When class B or class C boundary accuracy applies[4]

- Class C accuracy tolerances are not to be applied without first testing to determine if class B accuracy tolerances are applicable [r 3.2.3(b)].
- The exception to the above is where the title will remain limited as to parcels or an interim title [r 3.2.3(b)] or if the boundary is a water or irregular boundary [r 3.2.3(c)].
- If a boundary meets either class C or class D criteria [r 3.2.3 and r 3.2.4], then either of the classes may be used.
- If the boundary does not meet class C or D criteria, it must be resurveyed to class B standards [r 6.2(a)(vi)].

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[3] text changed to clarify interpretation of rule 3.2

[4] text changed to clarify interpretation of rule 3.2

When class C or class D boundary accuracy applies

- In specified circumstances where the accuracies of class B cannot be met, the use of class C [r 3.2.3] or class D [r 3.2.4] is permitted. These classes relate only to existing boundaries and boundary points except where a specific dispensation has been approved by the Surveyor-General [r 3.2.3(c)].

- The use of class C and class D is also permitted for new boundaries of open space covenants (*LINZR65308: Interim ruling on survey requirements for open space covenants)* (refer to Accuracy standards for new class C and D QEII open space covenant boundaries below).

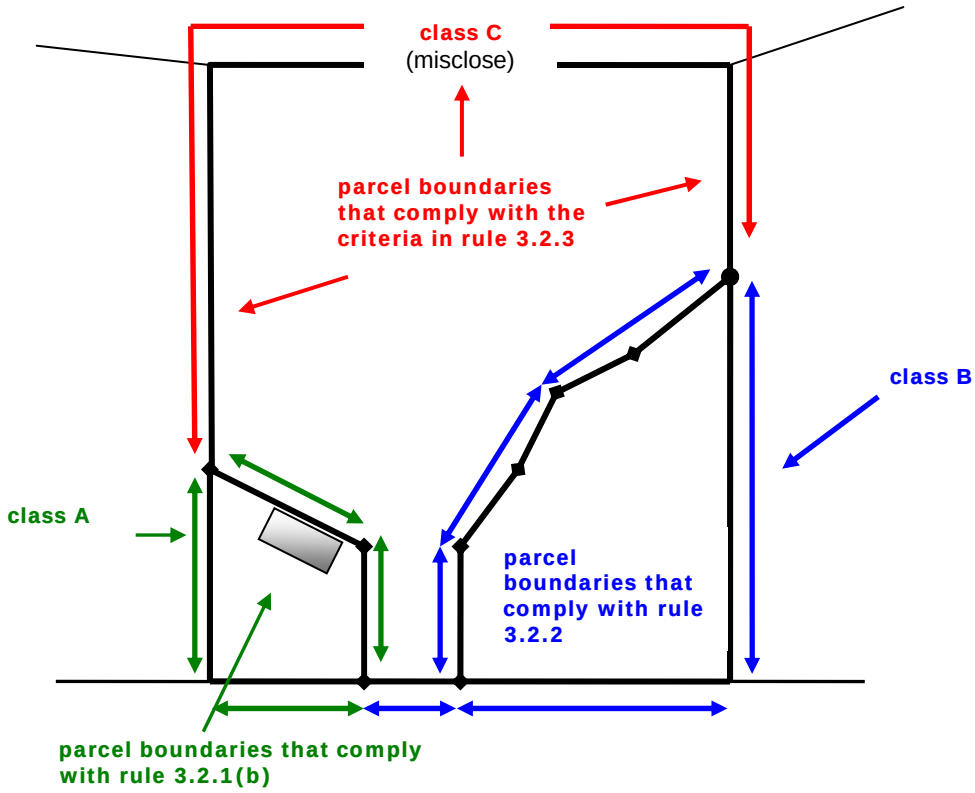

Figure 7: Boundary classes that comply with rule 3.2

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Class of boundary vector

Where a boundary's end points are of different classes, the lower class of accuracy applies between these end points [r 3.3.1(b) and r 3.7].

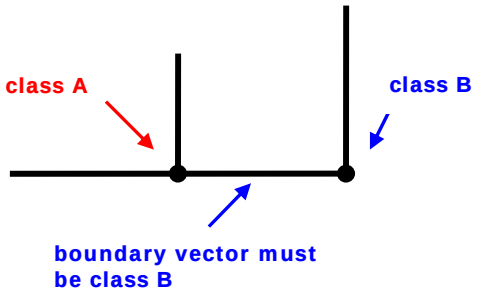

Figure 8: Accuracy class of boundary vector

Class of boundary point

The accuracy class of a boundary point is the highest accuracy class of the boundaries connected to that point [r 3.2.5(a)].

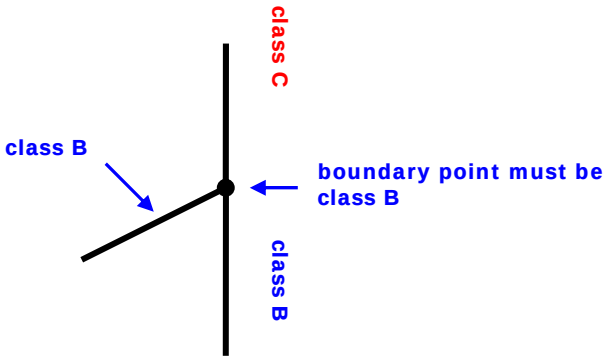

Figure 9: Accuracy class of boundary point

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Boundary accuracy where non-primary boundary coincides with class C or D primary parcel

- Where a new or existing non-primary parcel boundary coincides (intersects) with a new or existing class C primary parcel boundary, the non-primary parcel boundary may also be class C [r 3.2.3(b)]. The same applies for a class D primary parcel boundary [r 3.2.4(d)].
- Note that if the accuracy of the primary parcel boundaries is later upgraded upon resurvey, a non-primary parcel boundary that coincides with a primary parcel boundary may also need to be upgraded to a higher accuracy [r 3.3.1] (refer to Class of boundary point above).

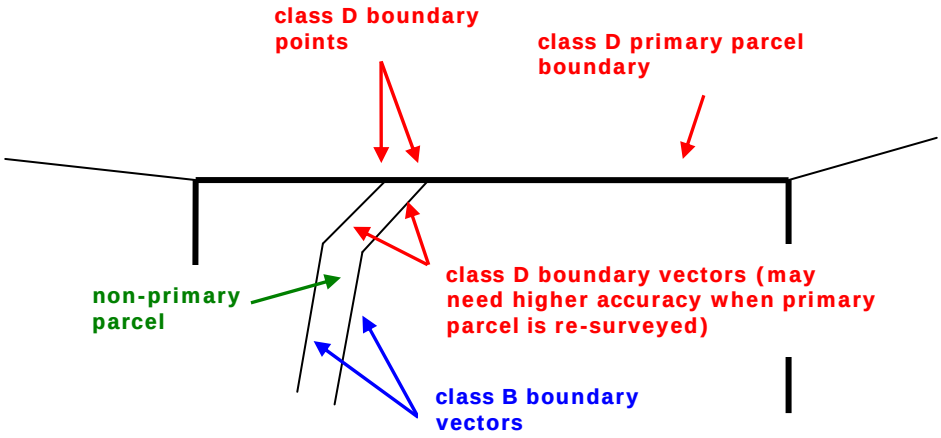

Figure 10: Boundary intersects with class D boundary

7. Accuracy of boundaries and risk of overlap

Rules relating to accuracy of boundaries and risk of overlap

3.3.2 Accuracy sufficient to avoid overlap

Risk of boundary overlap and adopted boundaries

- A boundary defined by adoption or an accepted boundary is not permitted where there is a risk of this boundary encroaching on another parcel [r 3.3.2].
- Note the risk of encroachment applies to all forms of adopted and accepted boundaries including right-line, irregular, and water boundaries.

Accuracy of underlying parcel boundaries[5]

- The accuracy between a new non-primary boundary and an existing underlying parcel boundary must comply with rule 3.3.1 (class A or B), rule 3.2.3(b) (class C), or rule 3.2.4(b) (class D) as appropriate.
- Where this accuracy cannot be achieved or verified, alternative requirements may apply (refer to Boundaries of underlying parcels may be 'defined by adoption' below).

continued on next page

[5] text changed to clarify interpretation of rule 3.3.1, 3.2.3 and 3.2.4

Risk of boundary overlap requires more precise accuracy

- In some circumstances that cannot be foreseen by regulation, the tolerances specified by rules 3.3 and 3.4 will not be adequate. This is particularly where new and existing boundaries are close to each other and the errors in the old surveys are either unknown or unable to be specifically located with confidence.
- In these circumstances, the relationship between the boundaries must be determined to more precise accuracies to determine if the boundaries intersect or overlap [r 3.3.2, 3.4(a) and 6.3(a)].

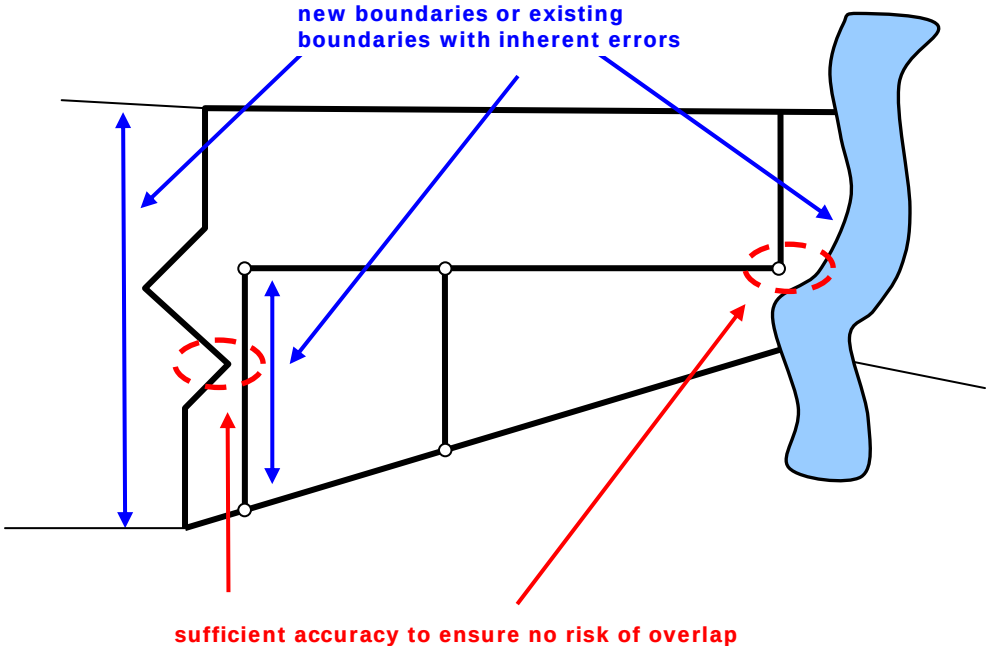

Figure 11: Accuracy standard to ensure no risk of overlap

8. Accuracy of right-line boundaries and arc boundaries

Rules relating to the accuracy of right-line and arc boundaries

3.3 Accuracy of right-line boundaries and arc boundaries

Two tiers for right-line and arc boundary accuracy tolerances

The accuracy standard specifies two tiers of accuracies:

- a more stringent level of accuracy to be met between 95 % of new points (a 95 % confidence level) [r 3.3.1, Table 2(i), (iii), and (v)], and
- a less stringent level of accuracy to be met by all points (100 %) [r 3.3.1, Table 2(ii), (iv), and (vi)].

These accuracies differ depending on whether the boundary points are classes A, B, or C.

More stringent standard for accuracy of right-line and arc boundaries

The more stringent tier requires the survey to provide **95 % likelihood** (confidence) that the relationship between the marks specified in the Rules meets the specified accuracies. This 95 % standard applies to all new work but not to adopted work. The standard uses the RSS method to calculate the accuracy value [r 3.3.1(a)(i), (iii), and (v)].

Less stringent standard for accuracy of right-line and arc boundaries

- This second tier is less stringent with tolerances approximately 50 % greater than the more stringent standard.
- The standard requires relationship between all (100 %) of the points specified in the Rules, including all **adopted points to** meet the specified standards. The standard uses a simple sum method to calculate the accuracy value [r 3.3.1(a), (ii), (iv), and (vi)].
- This means that up to 5 % of the relationships between new work are permitted to be outside the more stringent accuracy standard providing they are within the less stringent standard.

continued on next page

Accuracy of right-line boundaries and arc boundaries,

continued

Application of right-line and arc boundary accuracy standards for class A

- For new boundary points, the accuracy tolerance remains at about 0.04 m for points up to 100 m apart.
- For new and adopted boundary points, the tolerance increases from 0.06 m at a steady rate of 0.015 m per 100 m.

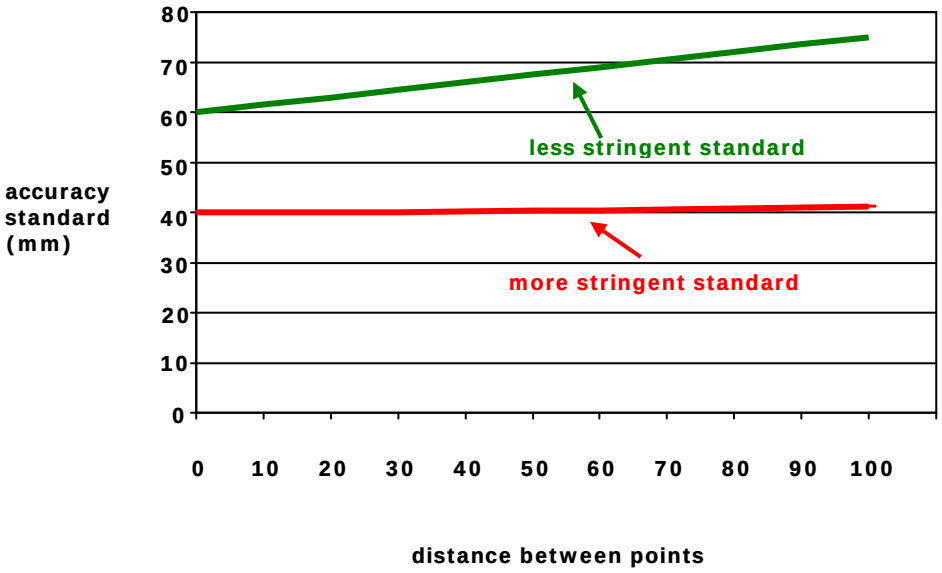

Figure 12: Accuracy standards for class A

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Accuracy of right-line boundaries and arc boundaries,

continued

Application of right-line and arc boundary accuracy standards for class B

- For new boundary points, the tolerance approximates 0.20 m for points up to 150 m apart and increases steadily as marks get further away.
- For new and adopted boundary points, the tolerance increases from 0.30 m at a steady rate of 0.06 m per 100 m.

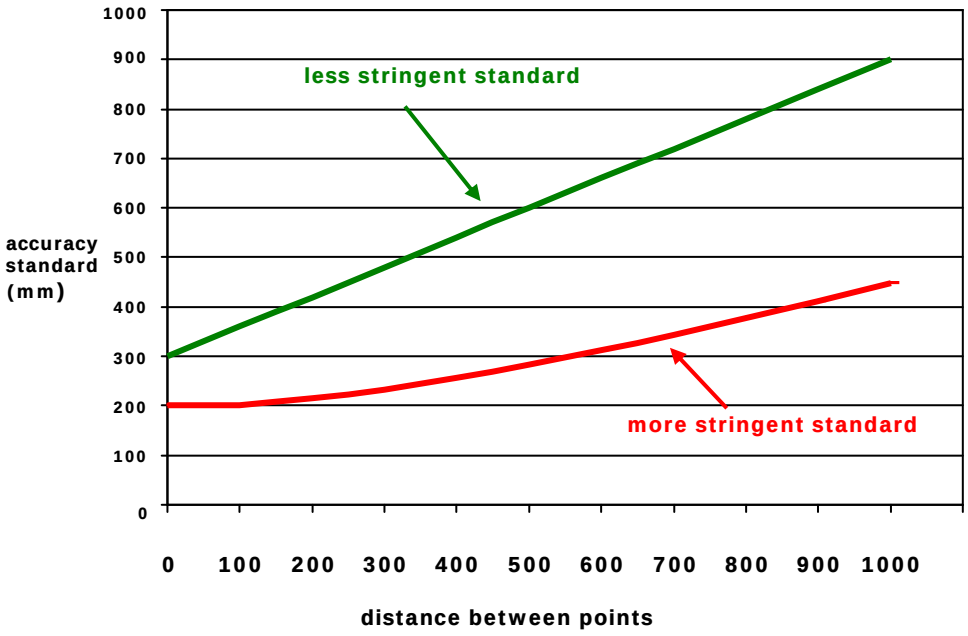

Figure 13: Accuracy standards for class B

Meeting the accuracy standards for right-line and arc boundary

- Confidence levels can be estimated through a least squares analysis and are influenced by the number and location of the vectors connecting the points (the strength of the geometry) and the accuracy of those vectors. Good survey practice, strong geometry, accurate measurement, and the inclusion of additional non-boundary vectors may provide assurance the required confidence levels are met.
- Note that where circuits include new and adopted vectors, the circuit closure may not be a definitive indicator of meeting the confidence levels because of the different accuracy specifications in rule 3.3.1.

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Accuracy of right-line boundaries and arc boundaries,

continued

Boundary points to which the right-line and arc boundary accuracy tolerances apply to

- The accuracy tolerances apply to all horizontal and vertical boundaries and all their associated boundary points that are on a parcel being surveyed.
- The affected points include:
  - adjacent points on a boundary line,
  - all points on the same boundary line,
  - points not directly joined by boundary lines,
  - points on intersected boundaries where the severed existing boundary is being replaced by two new shorter boundaries,
  - a non-primary parcel boundary point and an underlying parcel boundary point; for example, an easement boundary point and an associated primary parcel boundary point.

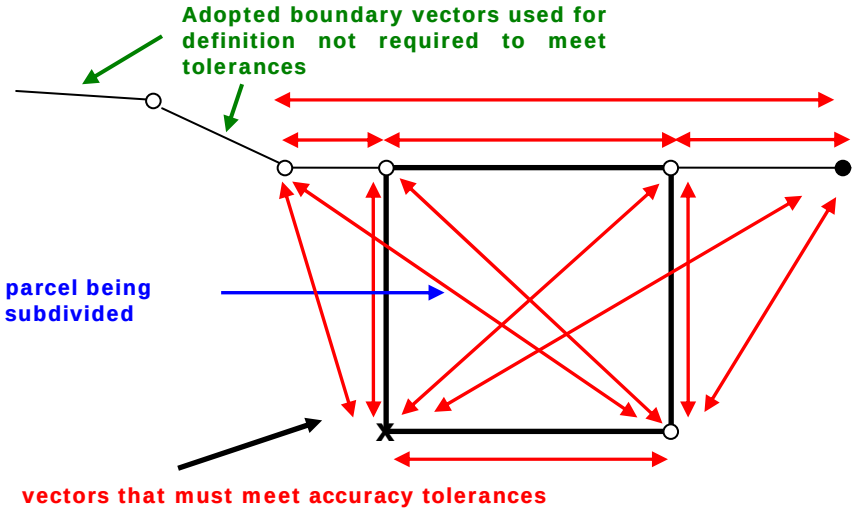

Figure 14: Accuracy tolerances apply to the relationships between all boundaries and their associated boundary points

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Accuracy of right-line boundaries and arc boundaries,

continued

Accuracy of adopted boundaries used for definition[6]

- Accuracy tolerances do not apply to adopted boundary vectors that:
  - are not associated with the parcel under survey, and
  - which are used as best evidence of a boundary location (in the same manner as poor quality traverse vectors are permitted by *LINZR65312: Ruling to exempt most adopted non-boundary survey marks from accuracy requirements in rule 3.1(b)*).

  This is illustrated in Figure 14: Accuracy tolerances apply to the relationships between all boundaries and their associated boundary points above.

- Adopted boundary vectors that are used as the best evidence of a boundary location should not be electronically captured in the CSD.

  This is because they will incorrectly influence the spatial relationships between the adopted positions and will be reported as non-compliant with the accuracy standards. Instead, they should be recorded on a calculation sheet or similar to illustrate the conflict.

  The CSD must then include captured vectors that result from resolving the conflict (eg the resultant re-computed vectors) [r 8.1(d)]. These will comply with the accuracy standards.

  The survey report must report on the conflict and the decisions made and refer to the calculation sheet [r 8.2(a)(v)].

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[6] text changed to clarify interpretation of rule 3.1(b)

Accuracy of right-line boundaries and arc boundaries,

continued

Right-line and arc boundary accuracies where parcels are separated

The boundary accuracy tolerances specified in rule 3.3.1 do not apply to the relationship between boundary points where the boundary points are on parcels that are not contiguous with other parcels being surveyed.

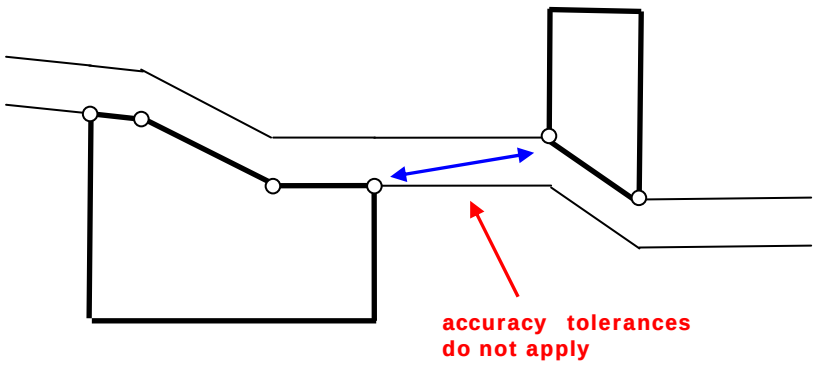

Figure 15: Parcels that are separated

Right-line and arc boundary accuracy for rural parcels abutting class A parcels

- Where a rural parcel abuts an urban area and adopts existing boundaries that are class A, the class A boundaries must comply with the applicable class A accuracy standards [r 3.3.1(a)(ii)].
- Providing these boundaries are not being marked and meet the class A accuracy tolerances, they may be defined by adoption (the requirement to define by survey under rule 6.2(a)(iv) only applies to the boundaries of a parcels under survey).

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Accuracy of right-line boundaries and arc boundaries,

continued

Accuracy standards for new class C and D QEII open space covenant boundaries[7]

- For new boundaries of open space covenants, the use of class C or classes C and D together may be used where class B boundaries would normally be required, (*LINZR65308: Interim on survey requirements for open space covenants)*.
- Where only class C provisions are being used, in many cases the CSD will simply depict a series of calculated boundaries.
- Where class C and class D provisions are being used (an example is shown in Figure 16: Accuracy requirements where class D used for QEII below):
  - the accuracy of all the new boundaries may be class C,
  - the accuracy of covenant boundaries that are adopted from the underlying primary parcel will be class D (accepted),
  - the relationship between the new boundary points and the underlying primary parcel boundary points must be within 5.00 + dist x 0.003 m (shown in Figure 16: Accuracy requirements where class D used for QEII below as 5 m for simplicity),
  - surveyors should exercise caution when placing a new boundary point within 5 m of a primary parcel boundary. If the point is later proven to be on the wrong side of the primary parcel boundary, the point may not define the correct extent of the new covenant boundaries to the required class C standards,
  - for PRM requirements see PRM distance criteria for QEII class D parcel boundaries below,
  - for bearing orientation see Bearings must be NZGD2000 above,
  - for connection to a cadastral network mark see When network connection requirement applies below.
- For CSD requirements see Recording covenant parcels below.
- Additional information is provided in *LINZG65701: Interpretation guide to interim ruling on survey requirements for open space covenants*.

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[7] text changed to clarify interpretation of *LINZR65308: Interim on survey requirements for open space covenants*

Accuracy of right-line boundaries and arc boundaries,

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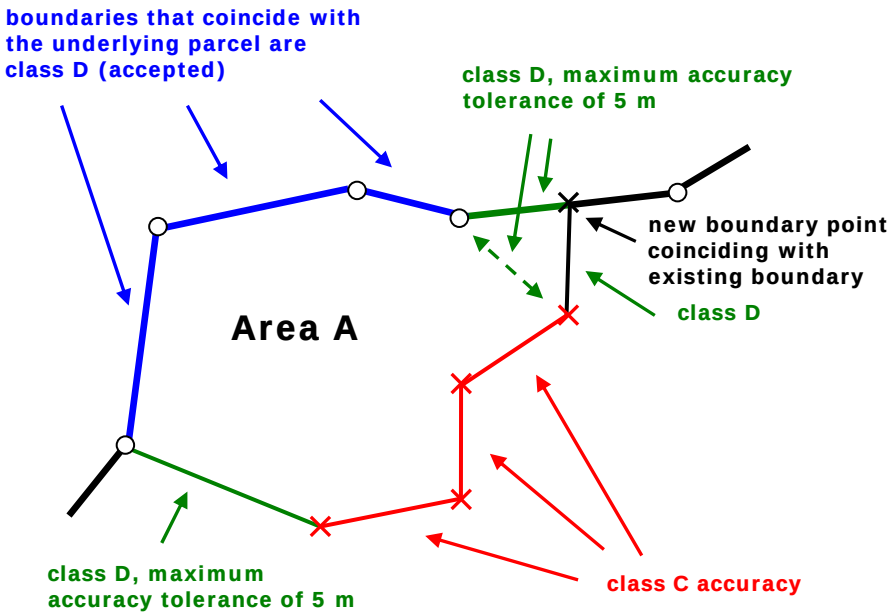

Figure 16: Accuracy requirements where class D used for QEII

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Accuracy of right-line boundaries and arc boundaries,

continued

Boundary accuracy of non-primary boundaries when primary parcel resurveyed

When the accuracy class of a primary parcel boundary is upgraded upon resurvey:

- an existing non-primary parcel boundary that intersects with that primary parcel boundary may need to be defined to that higher accuracy class [r 3.3.1] (refer to Class of boundary point above).

- all existing non-primary parcel boundaries must meet the same accuracy standard as the primary parcel boundaries [r 3.3.1]. The exception to this is where the boundaries of the non-primary parcel, when created were permitted to be of a lesser accuracy standard and that lesser standard is still permitted. An example is an existing QEII covenant surveyed pursuant to *LINZR65308: Interim ruling on survey requirements for open space covenants* where boundaries that did not coincide or intersect with the underlying parcel were permitted to be class C and class C boundary may remain providing the underlying parcel boundary is class B.

- This exception does not apply to non-complying non-primary parcel boundaries that were originally permitted by specific dispensation. A dispensation applies only to the survey being carried out at the time a dispensation was provided. A subsequent surveyor must reconsider the issues afresh and either resolve the issues or seek a further dispensation.

(see Figure 17: Example of retaining existing class C QEII covenant boundaries below)

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Accuracy of right-line boundaries and arc boundaries,

continued

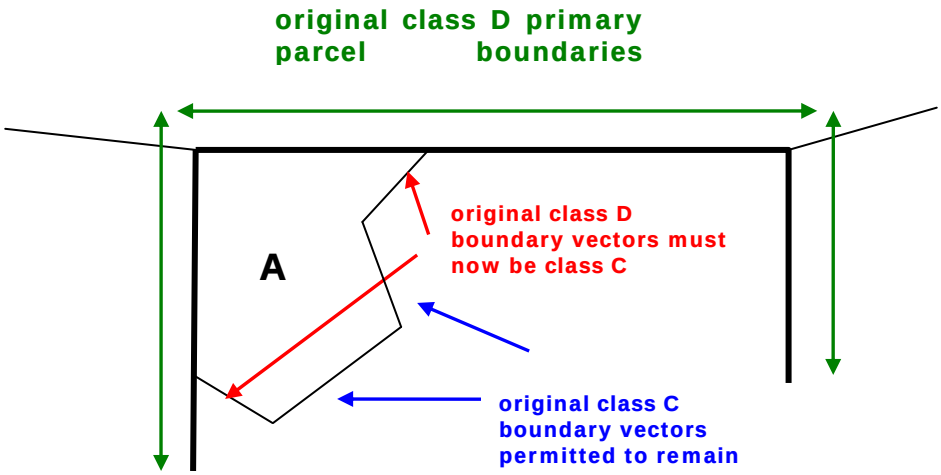

Figure 17: Example of retaining existing class C QEII covenant boundaries

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Accuracy of right-line boundaries and arc boundaries,

continued

Adopted boundary vectors that do not meet current standards

- There is no provision for allowing boundary vectors of new parcels to be adopted where they fail the current standards and only meet the survey accuracy tolerances in place at the time of the original survey. Where the criteria of classes C and D are not applicable, the inaccuracies must be resolved.
- For adopted boundary vectors that are not associated with the parcel under survey refer to Boundary points to which the right-line and arc boundary accuracy tolerances above.

Risk with adopted boundary vectors

- Historically, there was often no difference in the accuracy of 'traverse' vectors and boundary vectors as boundaries were often traversed. Adopted boundary vectors were therefore usually used for the purpose of defining a boundary position. This may no longer be suitable as the boundary accuracy standard for boundary vectors [r 3.3.1] is less than the survey accuracy standard [r 3.1].
- To reliably re-establish a boundary position, the network of non-boundary marks will normally provide the most accurate solution.

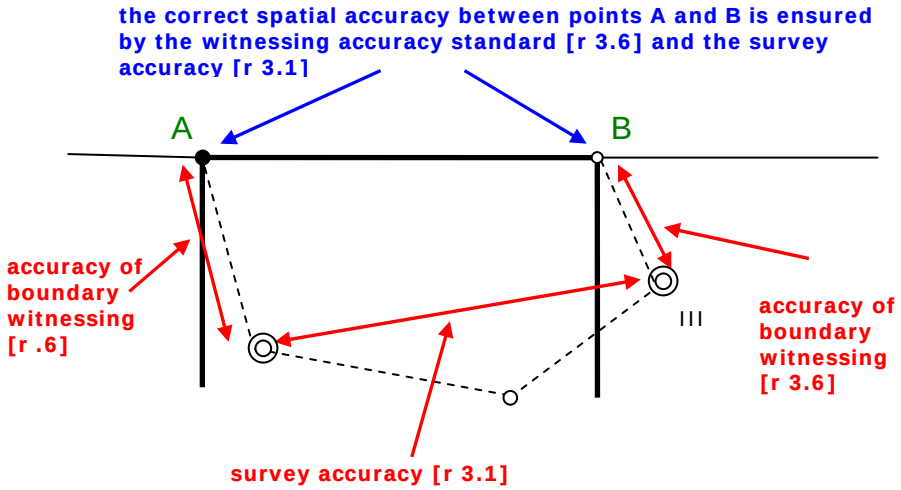

Figure 18: How to ensure correct spatial accuracy

9. Accuracy of water boundaries and irregular boundaries

Rules relating to accuracy of water and irregular boundaries

3.4 Accuracy of water boundaries and irregular boundaries

Issues relating to the accuracy of water and irregular boundaries

The accuracy of a water boundary or an irregular boundary must be determined to take into account:

- the risk of overlap or ambiguity in boundaries, including the water boundary on the other side of the water body,
- any statutory requirement applying to the width or size of the related water bodies. An example is the 3 m threshold that applies to marginal strips. If a stream is close to the 3 m threshold and Pt 4A Conservation Act is applicable, the accuracy will need to be sufficient to clearly establish whether the stream is over or under 3 m,
- the potential for the margin of the water body to move in the future and for the related water boundary to either move to a new position or to become permanent in the original surveyed position. An example is in the case of avulsion or a dried up stream where the original definition of the water boundary becomes primary evidence for the location of a boundary that is no longer movable,
- the nature of the physical feature that defines the boundary. An example is the bank of a stream, and
- the value of the land and the intensity of the land use.

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Accuracy of water boundaries and irregular boundaries, continued

Accuracy of the intersection of right-line boundary and water boundary

At the point where a right-line boundary and a water boundary intersect:

- the right-line boundary vectors must meet the boundary accuracy standards [r 3.3 and 9.6.13(c)], and
- in the case of a new boundary point, the accuracy of boundary witnessing specified in rule 3.6 must be met.

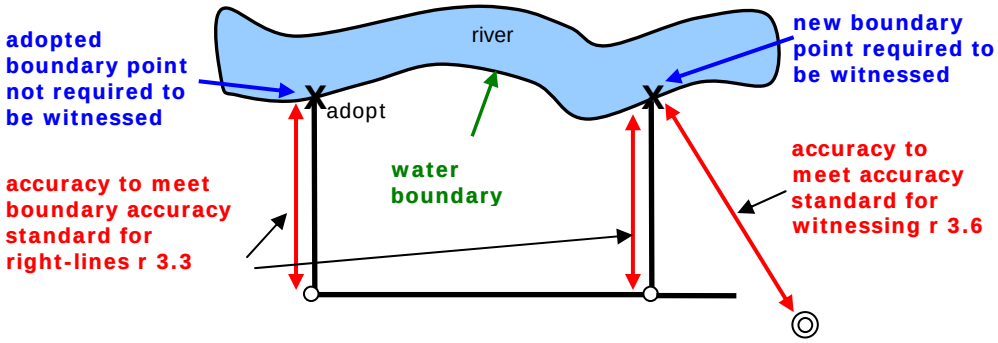

Figure 19: Accuracy requirements where right-line boundary and water boundary intersect

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Accuracy of water boundaries and irregular boundaries, continued

Accuracy of the intersection of right-line boundary and irregular boundary

At the point where a right-line boundary and an irregular boundary intersect:

- the right-line boundary vectors must meet the boundary accuracy standards of rule 3.3, and
- in the case of a new boundary point, the accuracy of boundary witnessing specified in rule 3.6 must be met.

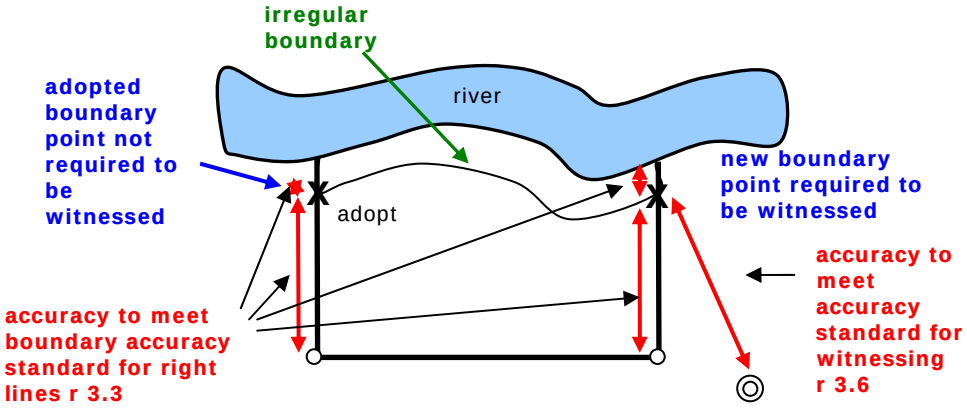

Figure 20: Requirements where right-line boundary and irregular boundary intersect

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Accuracy of water boundaries and irregular boundaries, continued

Accuracy of adopted water and irregular boundaries

In the case of adopted water boundaries or adopted irregular boundaries that are to be used to define a new parcel:

- an adopted boundary must be assessed to ensure it meets the accuracy criteria of rule 3.4,
- an accepted boundary is not required to comply with the accuracy requirements of rule 3.4. Examples where this occur include:
  - a boundary for a parcel that will remain in a limited title or an interim title [r 6.3(a)(v)],
  - an irregular boundary of a type specified in rule 6.3(a)(vi),
  - a boundary of a type specified in rule 6.3(b) for a balance parcel or residue parcel.

Class of survey required for water and irregular boundaries

All water and irregular boundaries must be assigned a class of survey [r 3.2].

10. Accuracy of permanent structure boundaries

Rules relating to the accuracy of permanent structure boundaries

3.5 Accuracy of permanent structure boundary witnessing

Relationship and accuracy of a boundary with a permanent structure

- A permanent structure boundary may be coincident with a permanent structure or may be a line in space referenced to a permanent structure (ie a non-coincident permanent structure boundary).
- The accuracy of a permanent structure boundary relies entirely on the accuracy of its relationship with the permanent structure.

Accuracy of underlying parcel boundaries where new permanent structure boundary[8]

- Where a new permanent structure boundary is being defined, the underlying parcel boundaries may be defined by adoption.
- Note that if the permanent stucture boundary is within 1 m of another boundary (class A) or 3 m (class B) and the relationship between the two boundaries cannot be accurately obtained (refer rule 3.5), the underlying parcel boundary may need to be defined by survey.

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[8] text changed to clarify interpretation of rule 6.4

Accuracy of a non-coincident permanent structure boundary

- Where the permanent structure boundary is not coincident with the permanent structure, the boundary must be witnessed by a clearly identified point on the structure [r 3.5(a)] and the relationship between the boundary point and this 'witness point' must comply with the accuracy specified in rule 3.6 [r 3.5(b)].

- These requirements do not apply to boundaries of existing units and common property defined under prior rules where no changes are being made to the parcel boundaries, appellation, and title (refer to *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward)*.

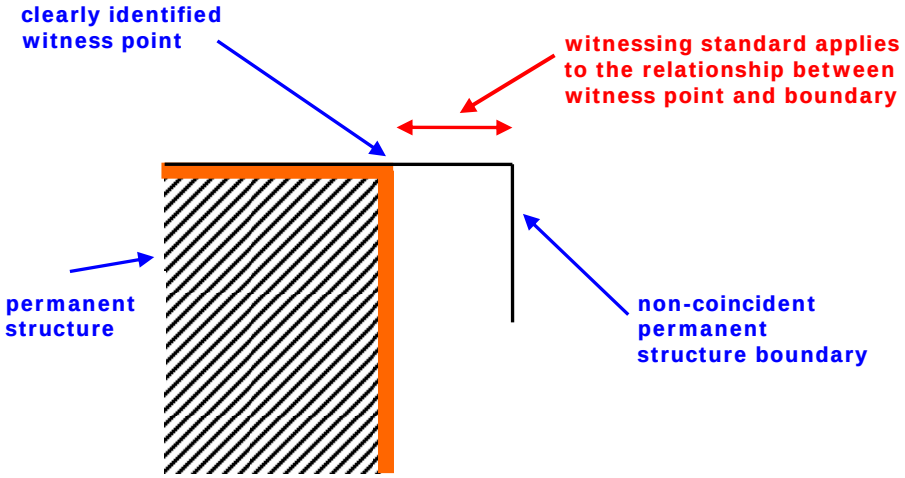

Figure 21: Accuracy standard for non-coincident permanent structure boundary

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Accuracy of permanent structure boundaries close to another boundary

- The accuracy between a permanent structure boundary and another boundary must comply with the accuracy specified in rule 3.3 where the boundaries are close to each other [r 3.5(c)] (refer to Depicting the relationship of units and cross lease areas to primary parcel boundaries in the CSD diagrams and Depicting the relationship of unit and cross lease boundaries where they are close below).

- These requirements do not apply to boundaries of existing units and common property defined under prior rules where no changes are being made to the parcel boundaries, appellation and title (refer to *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward)*.

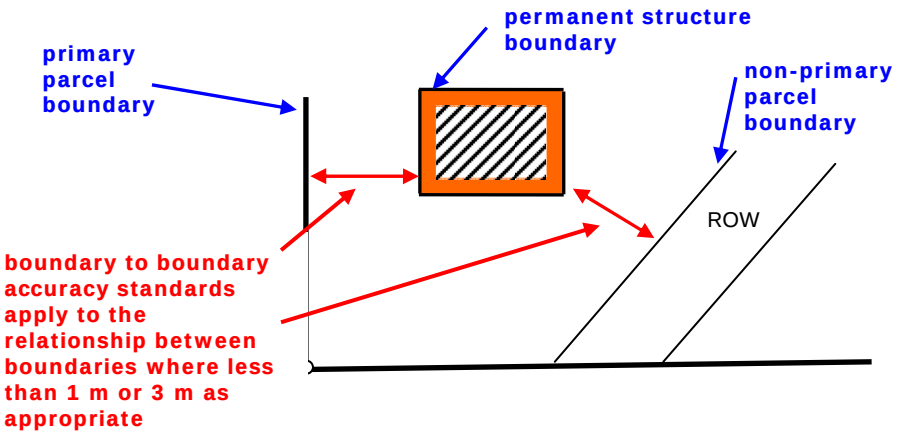

Figure 22: Accuracy requirements between boundary points of permanent structure boundary and any other boundary

DATUMS

11. Overview

Introduction to the requirements relating to datums

A boundary can be re-established with more certainty when a survey shares a common datum with other surveys in close proximity.

This chapter explains the rules that relate to the use of horizontal and vertical datums.

Links to all datum requirements in guide

This chapter contains the following sections:

12. Horizontal bearings

Rules relating to horizontal bearings

4.1 Horizontal datum – orientation

Bearings must be NZGD2000 where a new primary parcel point is created

- A survey which defines a **new** primary parcel boundary point must orientate all bearings in terms of the applicable official geodetic projection. This will always be the NZGD2000 Meridional Circuit projection in which the cadastral survey dataset is situated (refer to *LINZR65300: Ruling on official geodetic datum and projections*).
- As well as being internally consistent with other bearings on the survey, all bearings must be correctly orientated in respect of the meridian (within the accuracy standards in rule 3) [r 4.1][9].

Obtaining and proving orientation[10]

Reliable orientation can be obtained by several methods including:

- observing orientation lines into the survey from control marks,
- calculating orientation from cadastral survey network marks located at a sufficient distance to provide an accurate orientation (within the accuracy standards in rule 3),
- observing some or all lines using GNSS technology (refer to Bearings from GNSS below,
- obtaining an orientation from a previous CSD (refer to Existing NZGD2000 bearings may not be adequate, NZDG1949 bearings and NZGD2000 bearings may not be the same, Bearings from three origin marks and Testing bearings from three origin marks below).

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[9] text changed to clarify interpretation of rule 4.1

[10] text changed to clarify interpretation of rule 4.1

Horizontal bearings, continued

Bearings for QEII open space covenant

- A survey which defines a new QEII open space covenant in terms of the class D provisions in *LINZR65308: Interim ruling on survey requirements for open space covenants* must orientate all bearings in terms of the applicable official geodetic projection.
- More information is provided in *LINZG65701: Interpretation guide to interim on survey requirements for open space covenants*.

Existing NZGD2000 bearings may not be adequate

- The bearings on some existing NZGD2000 surveys may not have been accurately obtained. Surveyors will need to carry out sufficient work to ensure that the bearings derived from existing NZGD2000 surveys are in terms of the local NZGD2000 projection [r 4.1].
- Where a difference in orientation exceeds the applicable accuracy standards, an adjustment to the existing bearings may be required.

NZDG1949 bearings and NZGD2000 bearings may not be the same

- Although the datum orientation for NZGD1949 and NZGD2000 is virtually the same, the bearings on some existing NZGD1949 surveys have not been accurately obtained. Surveyors will need to carry out sufficient work to ensure that the bearings on these existing NZGD1949 surveys are in terms of the local NZGD2000 projection [r 4.1].
- Where a difference in orientation exceeds the applicable accuracy standards, an adjustment to the existing bearings may be required.

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Horizontal bearings, continued

Bearings from GNSS

- Orientations derived by GNSS can be determined directly in terms of the official geodetic datum independently of the orientation of existing surveys and old marks in the locality.
- The practice of adjusting GNSS derived bearings to be in terms of existing surveys and old marks in the locality creates a risk that the final orientation will not be in terms of the required datum and projection.

Bearings from three origin marks

- It is no longer a rule requirement to obtain a bearing origin from three existing marks. The Rules do not specify an 'origin of bearings' and a surveyor may use any method they consider adequate to ensure their survey orientation meets the requirements of rule 4.1.
- A theodolite can be used to carry forward an existing orientation based on observations between existing marks.

  Surveyors should note that this orientation is dependent on the accuracy of the previous survey or surveys. In the absence of control network marks or where existing surveys daisy-chained off each other, an accumulation of small errors in bearings often resulted in the orientation of such surveys being in terms of their origin marks, but not in terms of the purported datum or projection.

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Testing bearings from three origin marks

- Where orientation is obtained from existing marks, there are a number of ways that surveyors can test that their bearings are in terms of the meridian. Examples include:
  - observing from a mark on the survey to a cadastral survey network mark at a suitable distance from the survey and comparing the observed bearing with a bearing calculated from coordinates,
  - connecting the survey, either by measurement or by adoption, to two or more cadastral survey network marks and comparing the surveyed bearing with a bearing calculated from Landonline coordinates. When making this comparison, the marks used should be far enough apart to take into account the effects of coordinate inaccuracies,
  - examining the chain of previous surveys (and possibly survey reports) to validate the original orientation's reliability.
- The tests should verify that the bearings are in terms of the meridian within the tolerances specified in the accuracy standards (Note: the tolerances apply across the whole of the survey and therefore the most critical test is between the marks furthest apart).

Bearings where boundaries are not marked

Rule 4.1 applies irrespective of a new primary parcel boundary point being marked or unmarked.

13. Use of non-NZGD2000 bearings

Magnetic bearings and accepted boundaries

All bearings in a CSD must be in terms of the same orientation with the exception of a survey which is permitted to accept a boundary with a magnetic bearing [r 4.1(d)]. In this case, the magnetic bearing can remain without change [r 8.4]. Note that the magnetic bearing must be identified in the CSD [r 9.6.12].

Bearings for non-primary parcel surveys

- Rule 4.1 does not apply in the case of a cadastral survey that only creates non-primary parcels, such as an easement parcel. The exception to this is for surveys that create new QEII covenants in terms of *LINZR65308: Interim ruling on survey requirements for open space covenants* where the bearings must be in terms of the official projection (refer to Bearings must be NZGD2000 above).
- All bearings must be in the same terms [r 4.1(c)], in which case bearings can be in terms of the bearings of the underlying parcel boundaries.

Bearings for surveys with no field measurements

- Rule 4.1 does not apply in the case of a cadastral survey that has no new field measurements [r 4.1(b)]. Examples include surveys which are created from data which is adopted from existing survey records.
- All bearings must be in the same terms [r 4.1(c)].

Bearings for boundary marking surveys

Rule 4.1(a) does not apply in the case of a survey that only marks existing boundaries (refer to Survey types for boundary marking below). Note, rule 4.1(c) still applies.

14. Horizontal connection

Rules relating to horizontal connection

4.2 Horizontal datum – connection

Meaning of Cadastral survey network mark

Cadastral survey network mark is specified as an NZGD2000 mark of horizontal 6th order or better (refer to *LINZR65302: Ruling on cadastral survey network marks*).

Horizontal connection can be by survey or adoption

- The connection between the new survey and the cadastral survey network mark may be either by field measurement or by the adoption of vectors.
- Irrespective of the method used, the survey accuracy standards [r 3.1] must be met and the CSD must include sufficient vectors to verify that this standard has been met [r 8.1(d)].

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When network connection requirement applies

- All field surveys that define a boundary point on a primary parcel being created by the survey must connect to a 6th order or higher cadastral survey network mark if one exists:
  - within 500 m for class A,
  - within 1000 m for class B, or
  - within 2000 m for class C boundary points.
- The distances specified are 'as the crow flies'.
- The requirement to connect to a 'local' cadastral survey network mark within the distances specified in rule 4.2 applies even if the survey may have also connected to other cadastral survey network marks further away.
- A survey for a QEII open space covenant which uses the class D provisions of *LINR65308: Interim ruling on survey requirements for open space covenants* must connect to one or more cadastral survey network marks, irrespective of the distance to such a mark (*LINZR65308: Interim ruling on survey requirements for open space covenants)*.

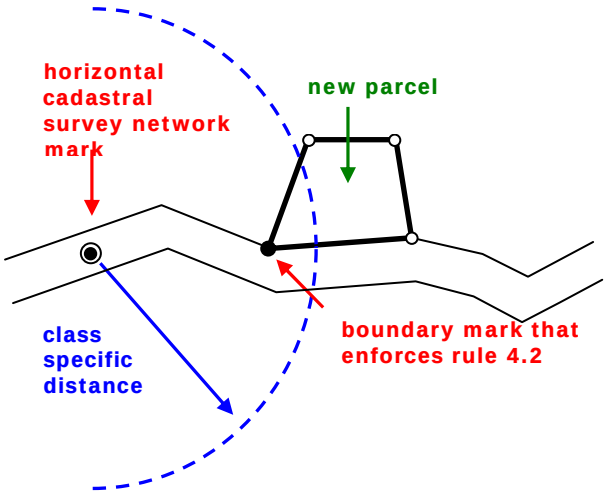

Figure 23: Primary parcel boundary mark requiring connection of survey to a cadastral survey network mark

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Horizontal connection, continued

Horizontal connection not required for redefinition survey or easement survey

- Rule 4.2 does not apply in the case of a cadastral survey that does not define or mark a new primary parcel point. Examples of such surveys include:
  - a boundary marking survey (refer to Survey types for boundary marking below),
  - the creation of non-primary parcels only as in the case of an easement survey,
  - the creation of a new primary parcel that is the same shape as an existing primary parcel.
- Note that connection is required for a survey for a QEII open space covenant created in terms of *LINZR65308: Interim ruling on survey requirements for open space covenants* (refer to When network connection requirement applies above).

Coordinates not required

Surveyors sometimes use coordinates extracted from Landonline for the purpose of calculations. The Rules do not require the coordinates or an origin of coordinates to be provided as part of the CSD.

Orientation can be without connection

Survey connection to a network mark and the orientation of survey bearings are two separate issues. A survey that meets the orientation requirements of rule 4.1 need not be connected to a cadastral survey network mark if one is not within the distance requirements of rule 4.2.

15. Vertical datum

Rules relating to vertical datum

4.3 Vertical datum

Official vertical datums

The official vertical datums are:

- the New Zealand Vertical Datum (NZVD2009) that covers the whole country, and
- the 13 local mean sea level vertical datums

(refer to *LINZR65301: Ruling on official vertical datums).*

Meaning of vertical control mark

A vertical control mark is specified as an NZGD2000 mark of vertical orders 3V or better (refer to *LINZR65303: Ruling on vertical control marks*).

Vertical datum connection can be by using existing marks

- Where reduced levels must be in terms of the official vertical datum, connection to a control mark is not expressly required if levels can be obtained from other existing heighted marks in terms of that datum.
- For a stratum boundary, if one or more vertical control marks are within 150 m (class A) or 500 m (class B) and one of these marks satisfies the criteria for a witness mark, then it is to be used as a heighted witness mark [r 7.3.4(b)][11].

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[11] text changed to clarify interpretation of rule 7.3.4(b)

When vertical connection requirements apply

- In the case of a heighted boundary, reduced levels must be in terms of an official vertical datum if an order 3V or higher vertical control mark is within:
  - 200 m of any class A boundary point which is defined by the use of a reduced level, or
  - 500 m of any class B boundary point that is defined by the use of a reduced level.
- The distances specified are 'as the crow flies'.

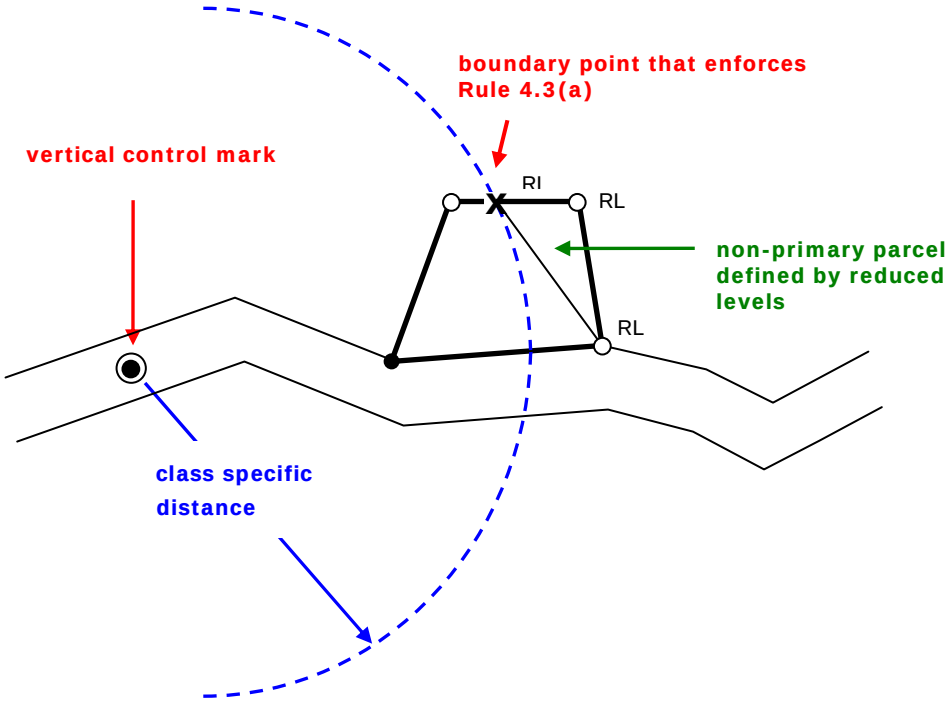

Figure 24: Boundary point requiring reduced levels to be in terms of an official vertical datum

Alternative or assumed vertical datums

An alternative vertical datum or assumed datum may be used when rule 4.3(a) does not apply [r 4.3(b)].

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Vertical datum, continued

Use of 'unofficial' local authority heighted marks

- In some cases, local authorities have heighted survey marks, but these heights are not recorded in the cadastre as part of the geodetic control network.
- If a survey is required by rule 4.3(a) to be in terms of an official vertical datum and a local authority height is nominally in terms of that datum, then the source of the origin of heights is required to be recorded in the CSD [r 8.1(f)].

Stratum boundary must have reduced levels

Where a boundary is a surface that is mathematically described by having a reduced level at one or more boundary points, the boundary is considered to be a stratum boundary [r 6.8].

Transforming heights between datums

- The New Zealand Vertical Datum 2009 (NZVD2009) is defined by the NZGeoid2009 geoid surface.
- The online coordinate conversion service on the LINZ website enables heights (and coordinates) to be transformed between NZVD2009, NZGD2000 (ellipsoidal heights), and the 13 major local vertical datums.
- The accuracy of the converted heights will be a combination of the original height accuracy and the NZGeoid2009/transformation accuracy. The Rules specify the accuracy between heighted points, not the heights themselves. Over the scale of most cadastral surveys, the effect of NZGeoid2009 transformation errors on height differences is likely to be small. The major source of error is likely to be from the surveyor's determination of heights.

Parcels

16. Overview

Introduction to the requirements relating to parcels

It is essential that the cadastre and land title documents record the extent of each portion of land (ie the parcel) that relates to a particular interest, in an unambiguous manner. This relates to land recorded by all tenure manages including the RGL, Commissioner of Crown Lands, and MLC.

This chapter explains the rules that relate to how existing parcels are to be dealt with, the types of new parcels, and how these new parcels must be described.

Links to parcel requirements in the guide

This chapter contains the following sections:

Dealing with parcels

17. Overview

Introduction to the requirements on how to deal with parcels

It is essential that the cadastre and land title documents record the extent of existing parcels of land to be extinguished and new parcels to be created, in an unambiguous manner. This relates to land recorded by all tenure manages including the RGL, Commissioner of Crown Lands and MLC.

This section explains the rules that specify how existing parcels are to be dealt with and how and when new parcels are to be created.

Links to dealing with parcel requirements in the guide

This section contains the following topics:

18. Accounting for parcels

Rules relating to accounting for all parcels

5.1 Accounting for parcels

Accounting for all land in an existing primary parcel

- All primary parcels being extinguished must be replaced in their entirety by one or more new primary parcels [r 5.1].
- This requirement ensures that there are no gaps in the cadastre and that there are no portions of land where ownership is unknown or uncertain.

Accounting for existing multi-polygon parcels

- Parcel means an area or space that is a single contiguous portion of land separately identified in a CSD or in the integrated cadastre [r 2].
- Where two or more existing parcels share an appellation and area, as in the case of some existing multi-polygon parcels, only the parcel being surveyed needs to be accounted for.
- In dealing with multi-polygons where the appellation is being shared, actions will need to be completed within Landonline to enable the survey to be completed (refer to Existing multi-polygon parcels with separate areas and Existing multi-polygon parcels without separate areas below).

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Legalisation surveys and land that will remain in current ownership[12]

- Although past regulation exempted surveys of land acquisition under the Public Works Act 1981 from accounting for the entire existing primary parcel, this no longer applies.
- When land is being taken out of an existing primary parcel by a legalisation survey, all of that original parcel must be extinguished and new parcels created, including what has traditionally been called the balance parcel.
- All parcel boundaries (including the land subject to the legalisation action and land remaining in current ownership) are subject to the Rules. For each of these new parcels, boundaries may need to be defined by survey [r 6.2], while in other cases they may be able to be adopted [r 6.4], or accepted [r 6.3] (refer to Class A parcels under 0.4 ha to be defined by survey below).
- Where the land is registered under the Land Transfer Act 1952 (LTA), on registration of the gazette (notice actioning the legislation) LINZ will automatically issue to the registered proprietors a new CFR for the land that remains in their ownership. This CFR will be limited as to parcels or be an interim CFR where relevant.
- For information on how to deal with existing easements, refer to Existing easements and legalisation surveys below.

[12] text changed to clarify interpretation of rule 5.1(a)

19. Representation of parcels

Rules relating to how a parcel must be represented

9.6.3 Parcel information

Depiction of a parcel in a CSD

- A new parcel must be represented as a single polygon or polyhedron [r 9.6.3(b)].
- There are exceptions to the above requirement for some existing easements:
  - those represented by centrelines with a known width, and
  - those represented by centrelines without a known width.

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Existing easements represented by centrelines with a known width

An existing centreline easement that is:

- not affected by the creation of new underlying boundaries is able to retain its representation as a centreline [r 9.6.3(c)].
- affected by the creation of new underlying boundaries is required to be depicted as polygon parcels. Note that although the depiction of the easement changes, the legal right does not, and the easement information is shown as existing easement information [r 10.2.2].

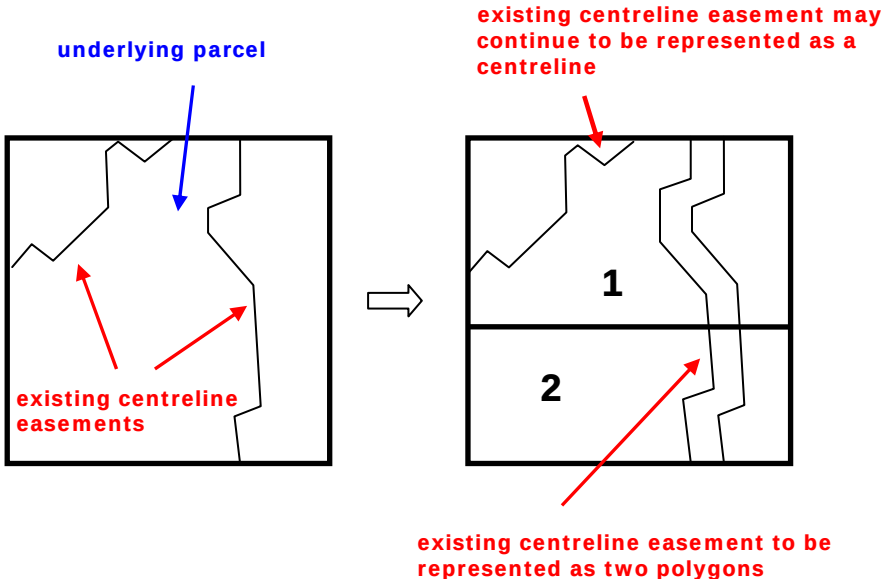

Figure 25: Existing centreline easement representation

Existing easements represented by centrelines without a known width

- The parcel for an existing centreline easement whose width is not known may be represented as a centreline, whether it is intersected by a new parcel boundary or not [r 9.6.3(c)(ii)].
- On the Diagram of Survey and Diagram of Parcels, the parcel for the easement retains its depiction as a centreline [r 9.6.3(c)(i) and r 10.4.2(c)(ii)] with the annotation **width unknown** [r 9.6.11 and r 10.4.8].
- All new (underlying) primary parcels that result from the relevant extinguished primary parcel are servient tenements and therefore are encumbered by this existing easement. The servient tenements are recorded as part of the information for existing easements in the schedule of existing easements [r 10.2.2].

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Representation of parcels, continued

Existing easements that are not defined spatially

- There are no survey requirements for an existing easement that
  - will be retained but
  - which has not been previously defined spatially on a CSD but
  - is referred to in a document.
- In this case, the CSD will include in the schedule of existing easements, a reference to the creating document and the easement parcel identifier will be the same as the appellation for the underlying parcel [r 10.2.2(b)].

Existing easements and legalisation surveys[13]

- The type of legalisation will determine how existing easements must be dealt with.
- For a parcel subject to the legalisation action:
  - where the legalisation action has the effect of cancelling existing easements (eg land to become road), existing easements are not depicted. In respect to the Public Works Act 1981, if an existing easement is not mentioned in the gazette, the easement is cancelled.
  - where the legalisation action does not have the effect of cancelling easements and the easements are not to be surrendered by other means, they must be depicted.
- For parcels not subject to the legalisation (eg the land remaining in private ownership), existing easements must be depicted.

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[13] text changed to clarify interpretation of rule 9.6.3 & 10.4.2

New multi-polygon parcels not permitted

- A multi-polygon parcel is formed when separate portions of land, ie polygons, are held together as one parcel with a single appellation and area.
- Historically, multi-polygon parcels often resulted from Māori land partitions or where rural sections were severed into separate portions of land by the creation of a road or a Crown-owned water race. These separate parcels were sometimes depicted as linked together by a vinculum.
- New multi-polygon parcels are not permitted.

Existing multi-polygon parcels with separate areas

- In the case of existing multi-polygon parcels, where each of the polygons has its own discrete area, only the polygon under survey needs to be subject to the normal definition and accuracy standards set out in the Rules. Other polygons are not required to be part of the survey.
- If the separate polygons have been linked in Landonline, the surveyor will need to contact LINZ through the exception process and request that the polygon under survey be unlinked from the other polygons in the spatial view of Landonline.

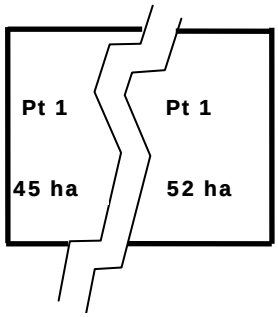

Figure 26: Multi-polygon with separate areas

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Existing multi-polygon parcels without separate areas

- In the case of multi-polygon parcels where the polygons do not have their own discrete areas, the survey must:
  - address the subject polygon in the normal manner including definition and accuracy standards set out in the Rules
  - in the survey report, provide a separate area for each other polygon that is not subject to the survey.

    Because the polygons will have the same Pt appellation, the report must be unambigious as to which area applies to which polygon,
- Where the separate polygons have been linked in Landonline, the surveyor will need to contact LINZ through the exception process and request that the polygon under survey be unlinked from the other polygons in the spatial view of Landonline.

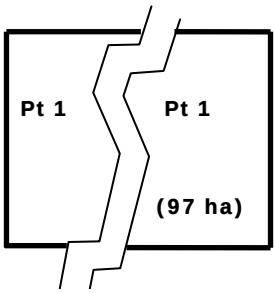

Figure 27: Multi-polygon with a total area

20. Intersection of parcels

Rules relating to the intersection of parcel boundaries

6.10 Boundary intersection to be defined

5.2 Overlap of non-primary parcels

Primary parcel boundary intersections

- Primary parcel boundaries are not permitted to cross over each other. Where these boundaries intersect, a boundary point that is defined by survey must be created [r 6.10].
- The creation of the boundary point has the effect of severing the primary parcel boundary into new shorter boundaries. Note these shorter boundaries must meet the accuracy standards in rule 3.3.1.

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Non-primary parcel boundary intersections

- In the case of a non-primary parcel (eg for an easement) over a primary parcel, the non-primary parcel boundaries are not permitted to cross over the primary parcel boundaries [r 5.2].
- Where primary and non-primary boundaries appear to touch each other, they can be said to **coincide** rather than to **intersect**.
- Because these primary and non-primary boundaries coincide, the underlying primary parcel boundaries are not considered to have been severed at the positions where the two boundaries become coincident, even though the provision of part boundary distances along the primary parcel boundary may give this appearance.
- Note that providing part distances has been traditionally the simplest way to show the relationship of the easement boundary with the primary parcel boundary.

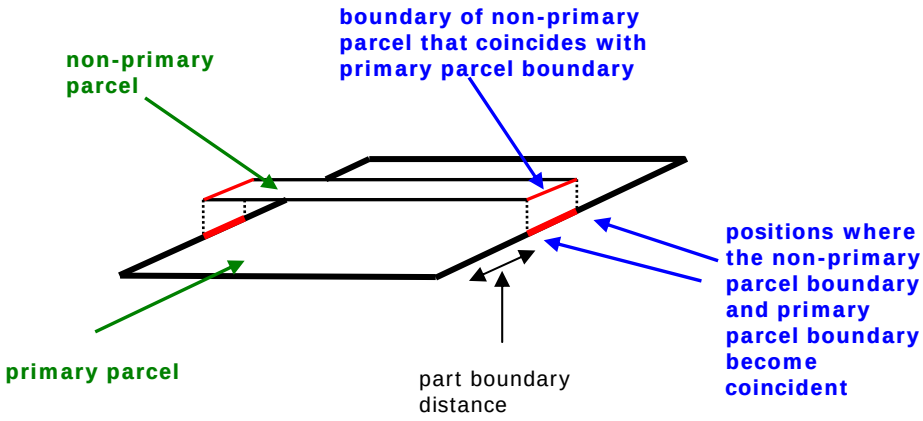

Figure 28: Coincidence with primary parcel boundaries

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Intersection of parcels, continued

Overlapping easement intersections

- Rule 5.2 does not apply to cases where a non-primary parcel boundary overlaps another non-primary parcel boundary.
- An example is the overlapping of an easement or covenant parcel over another easement or covenant parcel. This is not prohibited by rule 5.2 because the overlapping easements or covenants are not the underlying parcels. Therefore, there is no rule requirement to sever easements into discrete portions where they overlap each other.

  Landonline functionality, however, does not allow non-primary parcels in the same topology layer to overlap. A solution in many cases is to place one of the non-primary parcels in the secondary layer and the other in the tertiary layer[14].
- Note that in depicting overlapping easements on the Diagram of Survey and Diagram of Parcels, there is a risk that the total extent of each easement parcel is not clear. All information (including the extent of each parcel) must be clear and unambiguous [r 9.6.15(a) and r 10.4.10(a)].

Easement over a unit

- In some cases a non-primary parcel boundary is not permitted to overlap another non-primary parcel boundary.
- An example is an easement or covenant parcel to be created over a unit parcel. In this case, the unit parcel is the underlying parcel for the easement or covenant.

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[14] text changed to clarify application of Landonline

Easement over a movable marginal strip[15]

- In a land transfer CSD, a new easement parcel must not include land that is part of a movable marginal strip. This is because an easement can only be registered under the LTA over land in a CFR, the extent of which is deemed to not include the marginal strip (refer ss 24D(6) and 24(1) of the Conservation Act 1987).
- Where the CFR is annotated with a Pt IVA memorial, the above applies irrespective of whether the strip has been previously defined on an existing CSD. Surveyors will need to determine if the related water body is a qualifying waterway.

Unit title development where more than one primary parcel

The Unit Titles Act allows a unit title development to take place over more than one parcel of land. In this case, rule 5.2 permits a non-primary parcel boundary associated with the unit development, such as a unit or common area boundary, to cross the primary parcel boundary inside the boundaries of the development.

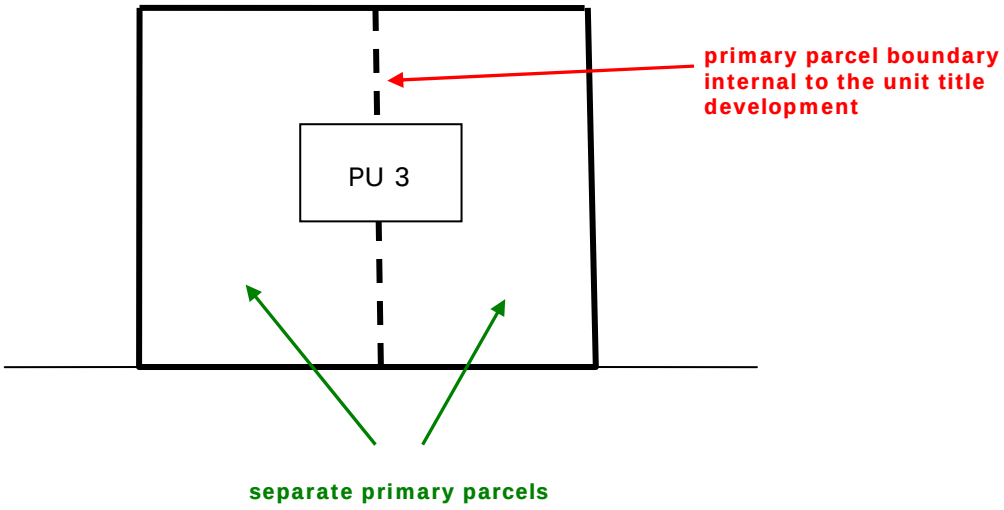

Figure 29: Non-primary parcel boundary crossing primary parcel boundary

[15] text changed to clarify application of legislation

21. Minimum width of parcel

Rules relating to parcel width

5.4 Width of parcel

Parcel width requirements

- Rule 5.4(a) allows a parcel to be less than 0.10 m for a portion of its length, but the parcel width must be at least 0.10 m at one point. This requirement is particularly relevant for new segregation strips.
- Note rule 5.4 does not apply to an existing parcel that is already under-width [r 5.4(b)].

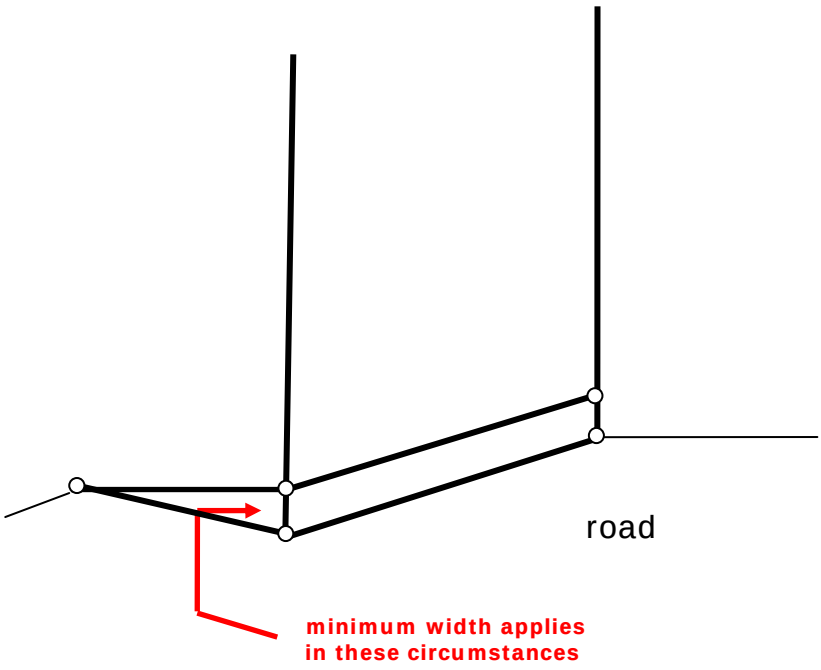

Figure 30: Examples of segregation strips

Types of parcels

22. Overview

Introduction to the requirements relating to types of parcels

It is essential that the cadastre and land title documents record the extent of each portion of land (ie each parcel) that relates to a particular interest, in an unambiguous manner.

This section explains the rules that specify the different types of parcels.

Links to types of parcels requirements in the guide

This section contains the following topics:

23. Primary parcel

Balance and residue parcels are primary parcels

Balance parcels and residue parcels are primary parcels.

Parcel type for common marine and coastal area[16]

- The land must be depicted as a new primary parcel where it is
  - either part of the bed of a river or lake to vest or
  - to become part of the common marine and coastal area

  under s 237A of the Resource Management Act 1991, (refer to Where common marine and coastal area under s 237A of the RMA Act 1991 below).
- The land must be depicted as a residue parcel where it was held by the Crown or local authority but which is now part of the common marine and coastal area pursuant to the Marine and Coastal Area (Takutai Moana) Act 2011 (MACAA), (refer to Residue parcels and common marine and coastal area below).

Primary parcels to be used for reclassification of reserve land[17]

- Land must be depicted as a primary parcel, where it is subject to a declaration as a reserve or is a reclassification of part of an existing reserve under the Reserves Act 1977.
- This differs from past policy where some reserve reclassifications were graphically described in accordance with the Surveyor-General's Graphic Descriptions Policy 2000/2.

[16] text changed to clarify application of Marine and Cooastal Area Act 2011

[17] text changed to clarify interpretation of rule 2 [definition of primary parcel]

24. Non-primary parcel

Secondary and tertiary parcels are non-primary parcels

Non-primary parcels have often been referred to informally as secondary or tertiary parcels. When the Rules are being applied, the term non-primary parcel should be used.

Witnessing non-primary parcel boundary points

In general, non-primary parcel boundary points are not required to be witnessed. For circumstances where these points are to be witnessed, refer to Witnessing non-primary parcel boundary points below.

Movable marginal strips are non-primary parcels

- A movable marginal strip is land owned by the Crown, a status that usually applies only to primary parcels.
- Notwithstanding Crown ownership, a movable marginal strip parcel is to be treated as a non-primary parcel within the appropriate primary parcel. This distinction is made to give effect to Part 4A of the Conservation Act 1987 which does not require the strip to be excluded from the title linked to that primary parcel.
- The Rules do not require new movable marginal strips to be surveyed where land is subject to Part 4A of the Conservation Act 1987. It is, however, Government policy to depict these strips where Crown-owned land is being prepared for disposal. Note that the Department of Conservation has produced a guideline to assist surveyors identify water bodies that qualify for marginal strips (refer to *DOCDM* – 192684: *The Identification of Water Bodies that will qualify for Marginal Strips, Department of Conservation, Wellington)*.
- Where a movable marginal strip is included in a CSD (including where required by the Crown or landowner or where it already exists spatially), the extent of the non-primary parcel is to be depicted [r 9.6.3(a) and 10.4.2(a)]. A more detailed interpretation of rule requirements is set out in Recording movable marginal strip and esplanade strip parcels below.

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Non-primary parcel, continued

Walkway parcel may be primary or non-primary parcel

Walkways may be created by an easement or lease over land, in which case the parcel will be a non-primary parcel. Alternatively, the land may be purchased, in which case the parcel would be a primary parcel (refer to ss 26 and 29 of the Walking Access Act 2008).

25. Balance primary parcel

When to use the term 'balance primary parcel'

Historically, where a large existing parcel was subdivided into a new small parcel and a new large parcel, the term 'balance parcel' was used informally when referring to the new large parcel. This use is not correct in terms of the 2010 Rules and should not be used in association with a CSD.

Balance parcels of road

- Although a road appears to be a long undivided corridor of public land, it is divided up into separate polygons in the spatial view of Landonline.
- When part of a road is to be stopped, the affected road polygon is divided into the road stopping parcel and the balance parcel.

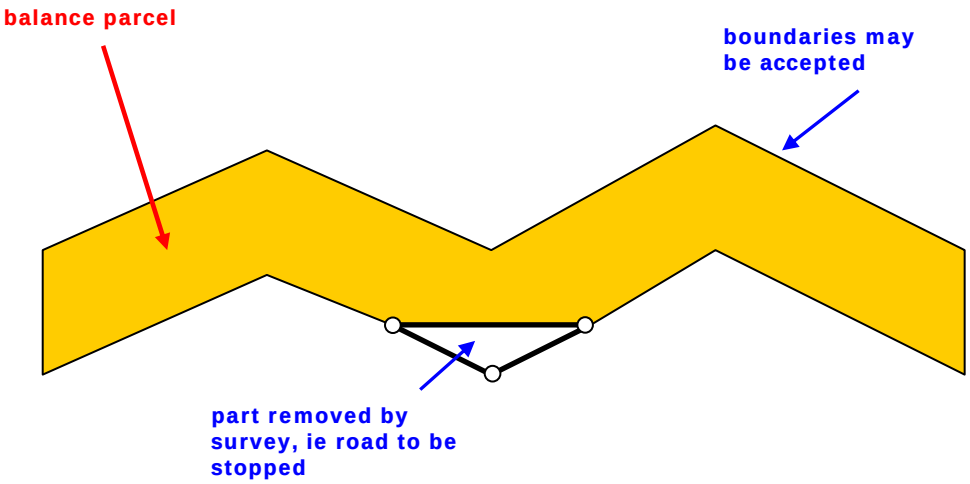

Figure 31: Balance parcel in case of road stopping

Boundaries may be accepted for balance parcels

The existing boundaries of a balance parcel that are not common with another new parcel on the survey may be accepted [r 6.3(b)], in which case they are:

- not required to meet any accuracy standards (refer to the definition of **accept**), and
- are class D [r 3.2.4].

26. Accretion and erosion parcels

Accretion and balance parcels

- Although the bed of a lake, river, stream, or the sea appears as an undivided hydro-parcel, it is divided into separate polygons in the spatial view of Landonline.
- Where accretion or the *usque ad medium filum aquae* presumption is being claimed, the claimed portion is incorporated into the new primary parcel and the remainder of the hydro parcel not claimed is a balance parcel.
- Note that the term **hydro parcel** is a term associated with Landonline and is not used in the Rules.

(refer also to Recording water boundaries below)

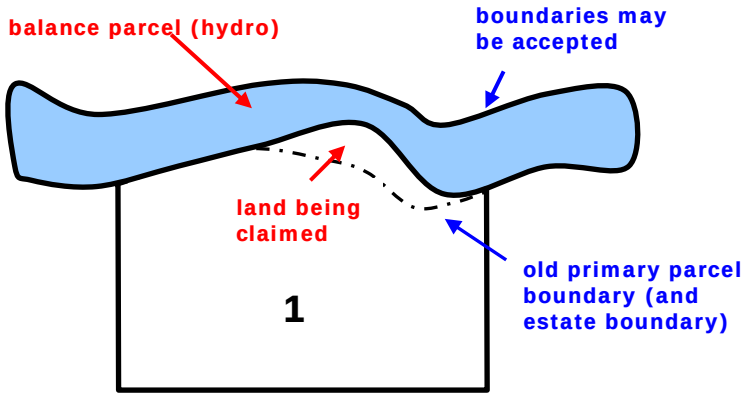

Figure 32: Example of accretion

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Erosion and residue parcels

- In the case of erosion, the extinguished primary parcel is divided into two new primary parcels; a 'dry' primary parcel and a 'wet' residue parcel (the erosion).
- The new residue parcel of erosion is normally given the parcel intent 'hydro' so that it can be associated with the adjoining lake, river, stream, or the sea.
- Note that the term **erosion** is not a parcel intent in Landonline whereas the term **hydro parcel**.

(refer to Recording water boundaries below)

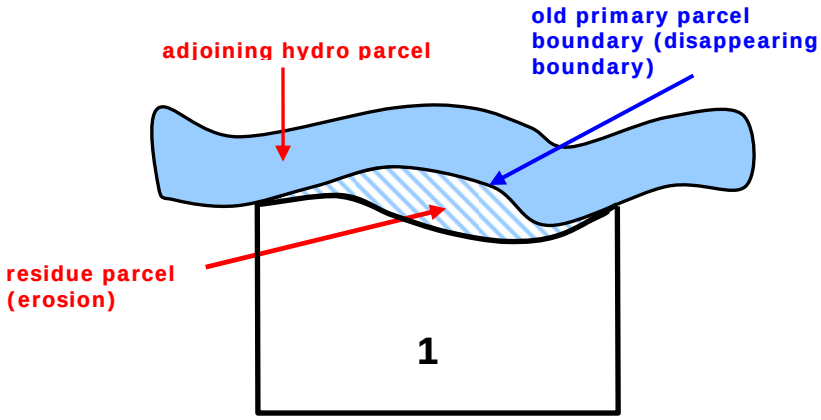

Figure 33: Erosion 'hydro' parcel

27. Balance non-primary parcel

Rules relating to a balance non-primary parcel

5.1(b) Accounting for parcels

Surrender of a portion of an existing easement[18]

- Where the purpose of a CSD is to depict as a non-primary parcel the extent of an existing easement that is to be surrendered, the balance non-primary parcel will be the portion of the original easement that will be retained (refer to Recording balance non-primary parcels below).
- Note, a 'balance non-primary parcel' is rarely used. Normally a CSD would include existing easements that are to remain after deposit [r 10.2.2].

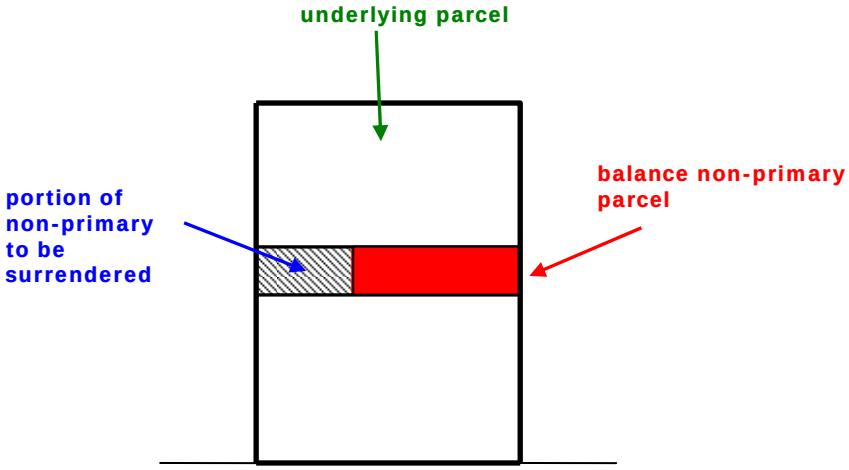

Figure 34: Surrender of part of a non-primary parcel

[18] text changed to clarify interpretation of rule 2 (definition of balance non-primary parcel)

28. Residue parcel

Limited as to parcels and a residue parcel

Where the title is limited as to parcels and land is held in possession adverse to the registered proprietor, a residue parcel will be created.

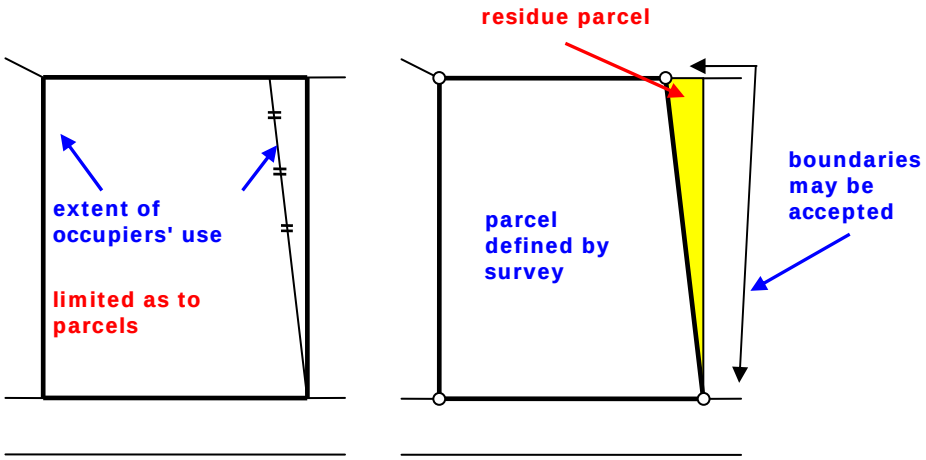

Figure 35: Residue parcel

Adverse possession and a residue parcel

Where a claim of adverse possession is being made for part of a parcel, the remaining portion of the parcel not being claimed must be a residue parcel.

Erosion parcel is a residue parcel

An erosion parcel is a residue parcel. For more information refer to Erosion and residue parcels above.

continued on next page

Residue parcels and common marine and coastal area[19]

- Land that is now part of the common marine and coastal area pursuant to the MACAA, must be included as a residue parcel (r 2 definition of residue parcel).
- Examples of where this would occur include:
  - land below MHWS that was previously vested in a territorial authority, eg part of an esplanade reserve [s 9, MACAA],
  - land below MHWS owned by the Crown or local authority on commencement of MACAA [s 11(3), MACAA],
  - Crown or local authority land previously above MHWS but has later become common marine and coastal area below MHWS as a result of erosion or other natural occurrence [s 11(4), MACAA].
  - land in fee simple estate that has eroded.

  This includes land that is defined by fixed boundaries.
- The new residue parcel is normally given the parcel intent '**hydro**' so that it can be combined in Landonline with the adjoining sea.
- The seaward boundary of the residue parcel (the old water boundary) must be converted to an irregular boundary [r 6.7(c)] and be accepted [r 6.3(b)].
- The residue parcel must not be given an appellation. In the CSD survey and title diagrams, the parcel must be described as 'Common marine and coastal area' or, where applicable, 'erosion (common marine and coastal area)' [r 9.6.3(h)(iii), r 10.4.2(f)(iii) and RGL requirements] (refer to Notations and memorials in Title Plan below).
- The adjoining water body (the sea) must be named or described on the diagrams with its name [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)].

Note, where a portion of land is to become part of the common marine and coastal area pursuant to s 237A, RMA 1991 refer to Where common marine and coastal area under s 237A of the RMA Act 1991 below.

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[19] text changed to clarify interpretation of legislation

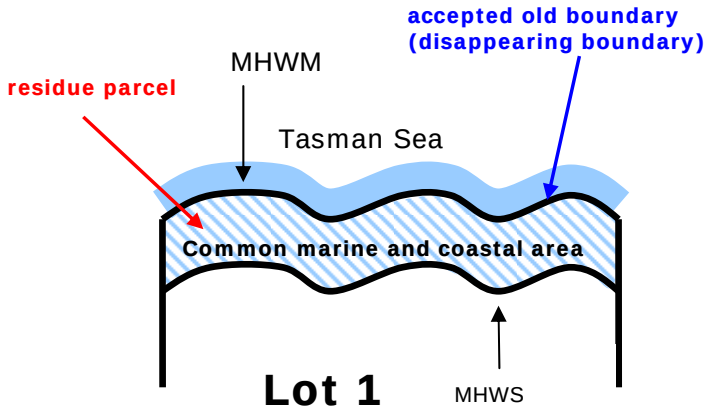

Figure 36: Example of common marine and coastal area as a residue parcel

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Residue parcel and lakebed, streambed or riverbed excluded from title

- Where an existing parcel includes an undefined water body and, upon survey, that water body is to be identified as a new separate parcel, which
  - is not intended to be vested in the Crown or a territorial authority, and
  - a title is not going to be issued for it,

  then this water body parcel must be a residue parcel.
- The new residue parcel is normally given the parcel intent 'hydro' to readily identify it as being a water body.
- The residue parcel must not be depicted with an appellation. In the CSD diagrams, the parcel must be annotated with the name of the water body or a simple label [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. In the diagram below this is shown as **streambed** as an example.

Note the above does not apply where the water body is being transferred or vested. In those cases, the land must be depicted in a primary parcel (eg Lot 1).

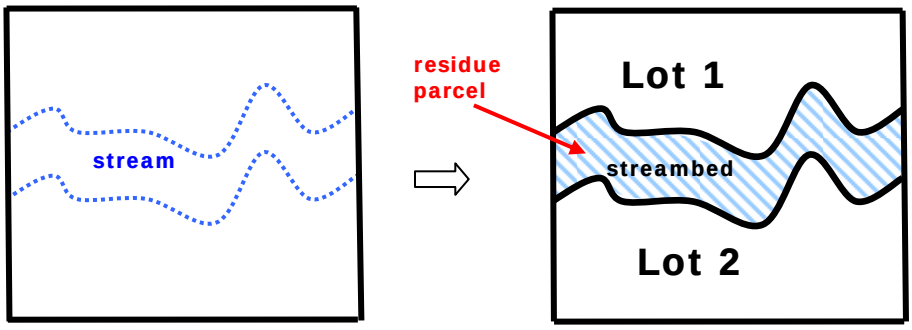

Figure 37: Example of streambed as a residue parcel

Boundaries of residue parcel may be accepted

The boundaries of a residue parcel that are not common with another new parcel on the survey may be accepted [r 6.3(b)], in which case they are:

- not required to meet any accuracy standards (refer to definition of **accept**),
- class D [r 3.2.4].

29. Extinguished parcel

Use of the term 'extinguished parcel'

- The term 'extinguished parcel' applies to a parcel that will disappear as a result of the survey and be replaced by one or more new parcels.
- Note that although, historically, the terms **extinguished parcel** and **underlying parcel** have been used to mean 'the parcel being subdivided', these two terms should now only be used as defined in the Rules.

30. Underlying parcel

Use of the term 'underlying parcel'

- The term 'underlying parcel' applies to a parcel that will remain intact as a result of the survey, but will be encumbered by a non-primary parcel. It is the servient parcel.
- Note that although, historically, the term 'underlying parcel' has been used to mean 'the parcel being subdivided', the term **underlying parcel** must now be used according to the definition provided in the Rules.

Relationship of easement to underlying primary parcel

In most cases, the underlying parcel for an easement will be a primary parcel.

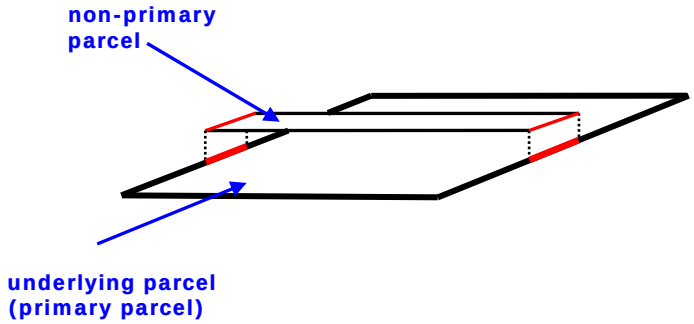

Figure 38: Underlying primary parcel

Underlying parcel can be a non-primary parcel

There are circumstances where an underlying parcel is not necessarily a primary parcel. Two examples are:

- Where an easement will be created over a lease parcel. In this case, the lease parcel (a non-primary parcel) is encumbered and is therefore the **underlying parcel**. The primary parcel on which the lease sits is not affected and therefore is not the underlying parcel.
- Where an easement will be created over common property, or over a unit, as part of a unit title development. Similar to the above example, the common property or unit (a non-primary parcel) is encumbered and is therefore the **underlying parcel.** The primary parcel the unit development sits on is not affected and therefore not the underlying parcel.

Parcel attributes

31. Overview

Introduction to the requirements relating to parcel area and appellation

It is essential that the cadastre and land title documents record information relevant to each new parcel created, in an unambiguous manner.

This section explains the rules that specify how parcels are to be described.

Links to parcel area and appellation requirements in the guide

This section contains the following topics:

32. Parcel area

Rules relating to parcel areas

5.3 Parcel areas

Calculating the area of a parcel

- The area of a primary parcel relates to the parcel's horizontal extent. Where a parcel shape changes at different elevations, the area of the parcel must be calculated from the widest extent of the parcel when vertically projected onto a horizontal plane, eg the vertical shadow or bird's-eye view from directly above [r 5.3(b)]. This principle applies in all cases, including parcels that are in airspace or underground, or are made up of various floors of different heights, such as **stratum parcels** (see Figure 39).

- The area of a parcel must be correctly calculated from the boundary information defining the boundary [r 5.3(c)(i)] and be expressed in hectares [r 8.3.2(c)]

- Note that there is no requirement to calculate the sum of areas for all primary parcels depicted in a CSD. The sum of stratum parcel areas will generally exceed the area of the extinguished parcel due to overlaps.

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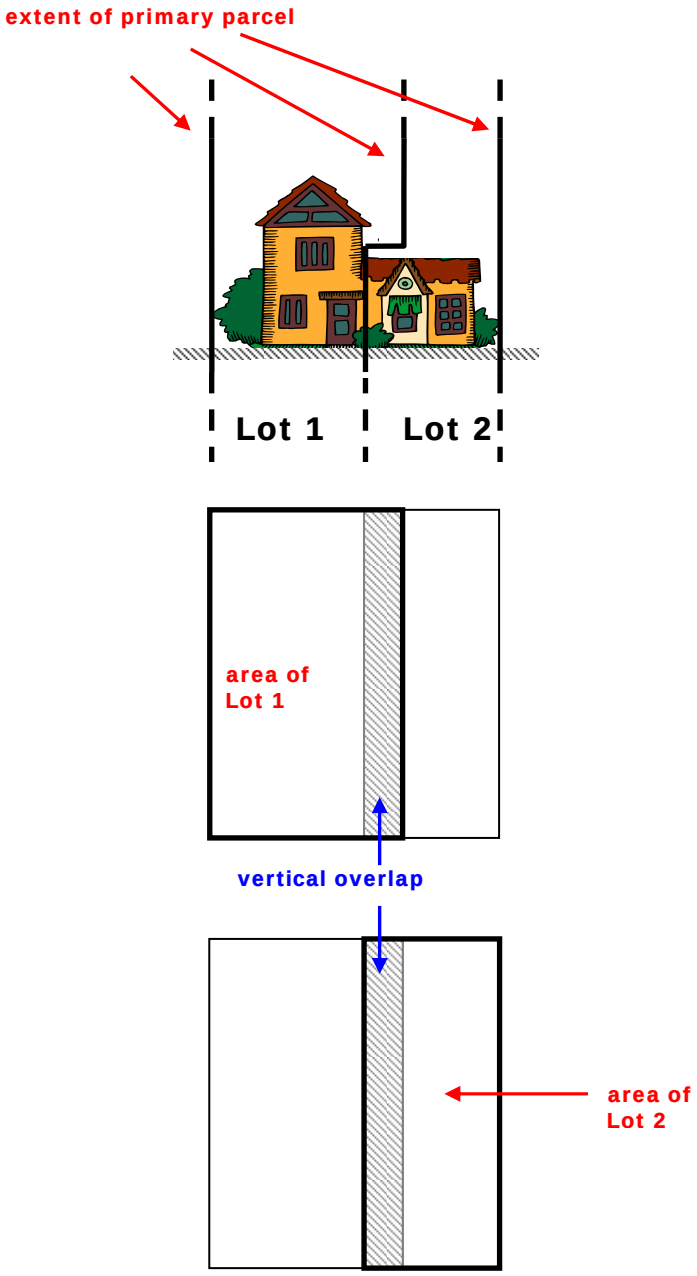

Figure 39: Area of parcel

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Area for accretion

- An area must be provided for portions of land claimed as accretion [r 5.3(a)(iii)].
- Where the accreted land is depicted in a Diagram of Survey [r 9.6.3(e)] or in a Diagram of Parcels [r 10.4.2(d)(iv)], this land must be clearly incorporated in the associated primary parcel being updated.
- The area of the updated primary parcel must include the area of accretion.

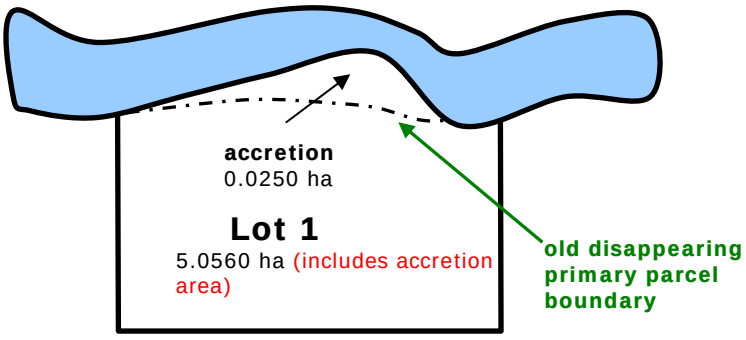

Figure 40: Areas for parcel that includes accretion

Area for erosion

Although the Rules require the depiction of land that has eroded [r 9.6.3(h)(iii)], they do not require an **area** for the erosion.

Area must not shown for movable marginal strip

- An area must not be shown for a movable marginal strip where the strip is depicted in a Diagram of Parcels [r 10.4.2(d)(iv)].
- The area of the movable marginal strip is included in its associated primary parcel.

33. Parcel appellation for general land

Rules relating to parcel appellation for general land

5.5.1 General land appellation

5.5.2 Parcel-type components

5.5.3 Māori land appellation

5.5.4 Unique parcel identifier

Components of appellation for general land

General land must be described by the use of three components in the following sequence [r 5.5.1].

Sequence	Example
1. Parcel type	Lot
2. Unique parcel identifier	1
3. Type and number of the CSD	DP 405689

Appellation for residue and balance parcels

- Residue parcels and balance parcels (including balance non-primary parcels) that have an existing parcel identifier must retain their existing description, except that they must have the prefix **Part** [r 5.5.1(b)].
- Where a balance parcel does not have an existing unique parcel identifier but has an existing description such as **sea**, **road** or **railway**, then this parcel retains that description.

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Parcel appellation for general land, continued

Parcel type 'Area' required for new and existing non-primary parcels

- Parcel types permitted under prior rules including **Flat**, **Garage**, **Swimming Pool,** or in the case of an easement, indicated as **marked,** are not permitted.
- The parcel type **Area** must be used for all non-primary parcels other than marginal strips, esplanade strips, and unit title parcels [r 5.5.2, Table 5]. This includes non-primary parcels such as easements, covenants, licenses, cross leases, and other leases.
- An existing easement must be given a new appellation in terms of the new CSD [r 5.5.1(a)(ii)]. This applies whether the easement shape remains unchanged or is severed (where it overlaps with new underlying parcels)[20].

Parcel type 'unit' must include full appellation

For unit title developments the parcel type **Unit** must not be used on its own. The full parcel type for a unit must be used, eg **Principal Unit, Accessory Unit** [r 5.5.2, Table 5]. Note that the CSD diagrams may depict the appellation in abbreviated form [r 9.6.3(d) and r 10.4.2(d)(ii)].

Unique parcel identifier for all parcel appellations

Irrespective of the parcel type, the parcel identifier must be unique within the dataset [r 5.5.4(e)]. Two examples are:

- a new Lot 1 may not coexist with a new Lease 1 in the same CSD.
- a new easement A cannot coexist with a new covenant A in the same CSD.

Common property must not have identifier

Common property must not have an identifier [r 5.5.4, Table 6].

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[20] text changed to clarify interpretation of rule 5.5.1

Parcel appellation for general land, continued

Appellations on staged cross lease developments[21]

Some older CSDs did not show identifiers on all the restrictive areas or 'common areas'. A new CSD must not add new identifiers to these parcels unless they are being re-surveyed as new parcels.

Appellations for 'common area' on a cross lease development[22]

- A new cross lease CSD must not identify an area of land as 'Common Area' or similar. The appellation must be 'Area….' as specified by rule 5.5.4.
- An exception to this is where a prior stage already shows a non-standard identifier. This non-standard identifier may be retained providing its associated parcel is not being changed.

[21] text changed to clarify interpretation of rule 5.5

[22] text changed to clarify interpretation of rule 5.5

34. Parcel appellation for Māori land

Rules relating to appellation for Māori Land

5.5.1 General land appellation

5.5.2 Parcel-type components

5.5.3 Māori land appellation

5.5.4 Unique parcel identifier

Components of appellation for Māori Land

Māori freehold land must be described by the use of three components in the following sequence [r 5.5.3].

Sequence	Example
1. Parcel name	Tumu
2. Unique parcel identifier	A7
3. Type and number of the CSD	ML 417582

Māori appellation only for Māori freehold land

- Only Māori freehold land is permitted to use the provisions of rule 5.5.3. Land with an existing Māori appellation that has a status of General Land must be provided with a general land appellation.
- If there is any doubt as to whether the land is general land, the Māori Land Court (MLC) should be consulted.

Unique parcel identifier for Māori Land appellation

The unique parcel identifier must be a sequence of alternating letters and numbers [r 5.5.4, Table 6].

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Parcel appellation for Māori land, continued

Exception to appellation format for Māori Land

- The exception to the standard appellation format is permitted where an alternative legal description has been notified by the Māori Land Court [r 5.5.3(b)]. Note, however, that irrespective of the MLC appellation, the type of CSD and CSD number must be part of that appellation [r 5.5.3(b)].
- Any MLC notification of an alternative legal description must be reported in the survey report [r 8.2(a)(xvi)].

Appellation for legalisation surveys of Māori Land

- Where a survey involves removing a portion of land from an existing parcel of Māori freehold land, the portion remaining as Māori freehold land must retain a Māori land appellation in terms of rule 5.5.3.
- For example, where land is to be acquired for road and is depicted on an SO CSD, the parcel of land to be acquired for road will have an appellation in terms of rule 5.5.1 (eg Section 1 SO 457894), and the portion to remain as Māori freehold land will have a Māori land appellation.

Boundaries

Introduction to the requirements relating to types of boundaries and boundary definition

To ensure there are no disputes as to the extent of ownership of interests, it is essential that the cadastre and land title documents record the boundaries that confine or divide contiguous estates in an unambiguous manner, and that these boundaries are defined appropriately.

This section explains the rules that specify the types of boundaries and the evidence to be taken into account in defining them.

Links to types of of boundaries and boundary definition in guide

This chapter contains the following topics:

Form of boundaries

35. Overview

Introduction to the requirements relating to the types of boundaries

To ensure that there are no disputes as to the extent of ownership of interests, it is essential that the cadastre and land title documents record the boundaries that confine or divide two contiguous estates, in an unambiguous manner.

This section explains the rules that specify the types of boundaries.

Links to all types of boundaries in guide

This section contains the following topics:

36. Information relating to all forms of boundaries

Form of boundary where boundaries coincide or are in common[23]

The form of boundary (refer to rule 6.5) must be identical where a new non-primary boundary is to coincide with an underlying parcel boundary, or share a common boundary with an adjacent non-primary parcel.

[23] text changed to clarify interpretation of rule 6.5

37. Right-line boundaries

Right-line boundaries only for horizontal extent of parcel

A right-line boundary may be used to define the horizontal extent of a parcel boundary [r 6.5(a)(i)], but not the vertical extent (refer to Stratum boundaries below).

Length and direction of line expressed as vector

The length and direction of the boundary is normally expressed as a vector [r 9.6.14(a)(i)].

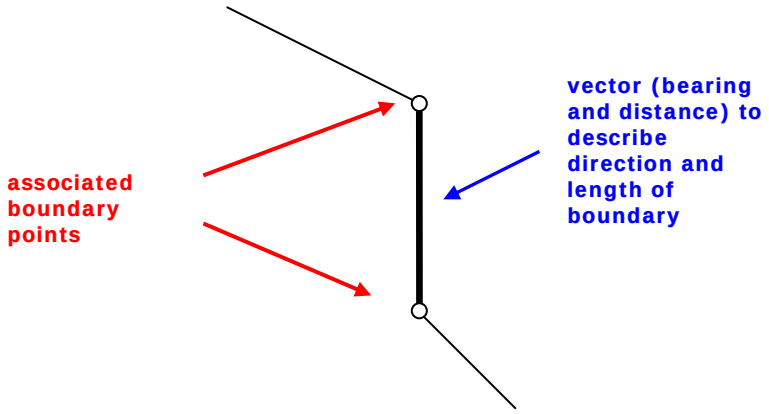

Figure 41: Example of vector to describe length and direction

Associated boundary points of right-line

Each right-line boundary terminates at an associated boundary point as illustrated in Figure 41.

38. Arc boundaries

Arc boundaries only for horizontal extent of parcel

An arc boundary may be used to define the horizontal extent of a parcel boundary [r 6.5(a)(ii)] but not the vertical extent.

Size and location of arc line expressed as a chord bearing

The size and location of the boundary is normally expressed by a chord bearing, arc distance, and radius [r 9.6.14(a)(ii)].

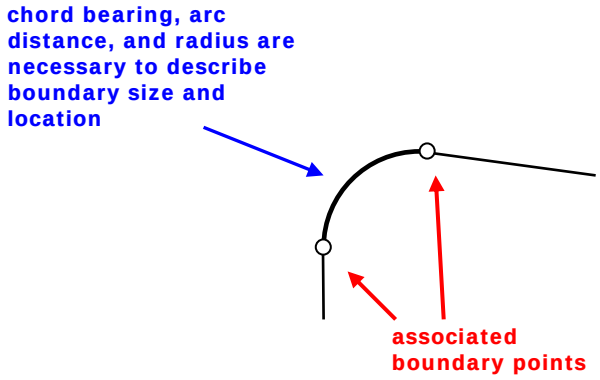

Figure 42: Example of arc boundary

Associated boundary points of arc boundary

Each arc boundary terminates at an associated boundary point as illustrated in Figure 42 above.

39. Stratum boundaries

Rules relating to a stratum boundary

Rule 6.8 Stratum boundary

Meaning of stratum boundary

A stratum boundary may be a surface that is:

- mathematically defined, or
- defined by the surface of a water body or by the bed of a water body (eg the bed of Lake Taupo).

Mathematical stratum boundaries require witness marks and PRMs

For all mathematically defined stratum boundaries:

- all new stratum boundary points must be witnessed [r 7.3.1]. There must be a minimum of three witness marks for class A and four witness marks for class B [r 7.3.2(c)],
- at least one witness mark must have a reduced level [r 7.3.4], and
- there must be at least two PRMs with reduced levels [r 7.4.1 and r 7.4.3(d)].

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Height covenants[24]

- A parcel to be subject to a height restriction is required to be depicted as non-primary parcel. This parcel must be defined in the horizontal sense, but is not required to be defined in the vertical sense. It is presumed that the instrument creating the restriction will define the height of the restriction in the manner determined by the parties.
- A CSD may define the height of a restriction by stratum boundary, but if it does, the CSD must comply with the rules for defining stratum parcels (refer to Mathematical stratum boundaries require witness marks and PRMs above).
- Alternatively, where a CSD is not intended to define a stratum boundary, it may include information about the height of a restriction as supporting information (eg reduced levels on marks, datum information, or the survey report expressing an intention to restrict a right).

  In this case, the Diagram of Survey or the Diagram of Parcels must not depict a stratum boundary in any form or show annotations that seek to describe a restriction.
- An existing covenant stratum boundary may be adopted except where the boundary is a class A parcel less than 0.4ha [r 6.2(a)(iv)].
- Where the boundary is adopted, the information on the source CSD that defines the extent of the boundary must be included in the new CSD and related diagrams. This includes the height origin, level and source [r 8.1(f)], bench marks, heights and heighted boundary marks [r 9.6.10].

Ground level not a stratum boundary

Ground level is not an appropriate description for a stratum boundary.

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[24] text changed to clarify interpretation of rules 6.2, 7.3, 7.4, 8.1 & 9.6

Mathematical description of a stratum boundary

- A stratum boundary that is mathematically described must have at least one point with a reduced level [r 6.8(a)].
- The boundary must be unambiguously defined [r9.6.15(a)]; for example, reduced levels must not conflict with declinations or elevations or, in the case of unit developments, be confused with permanent structure boundaries.

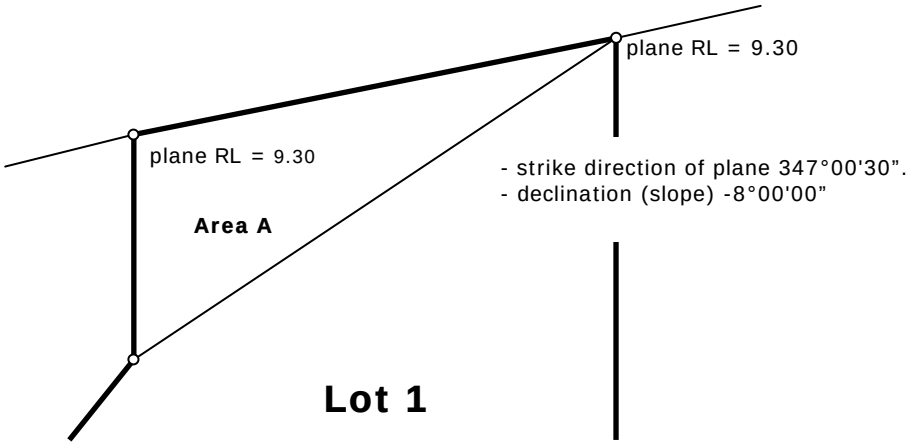

Figure 43: A stratum boundary with a mathematical description

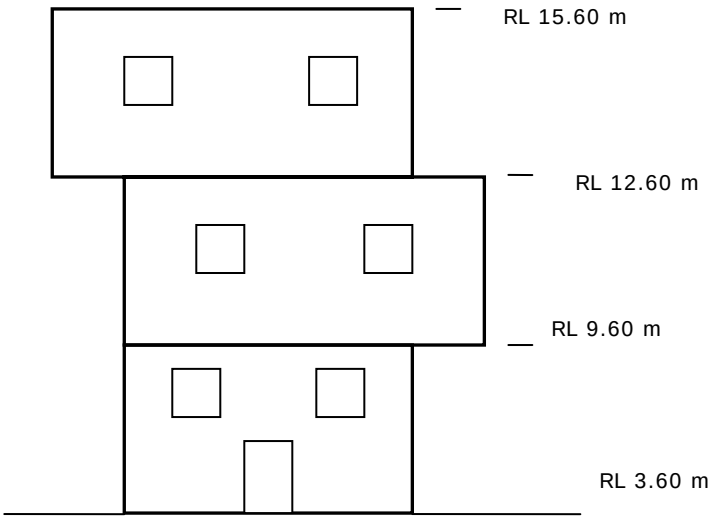

Figure 44: Stratum boundaries with reduced levels

40. Water boundaries

Rules relating to water boundaries

Rule 6.7 Water boundary

Water boundary types

Water boundary types include, but are not limited to, river bank, MHWM, and MHWS.

End points of a water boundary

- Each water boundary terminates at an end point.
- Each end point is required to have two vectors recorded in the CSD [r 9.6.13]

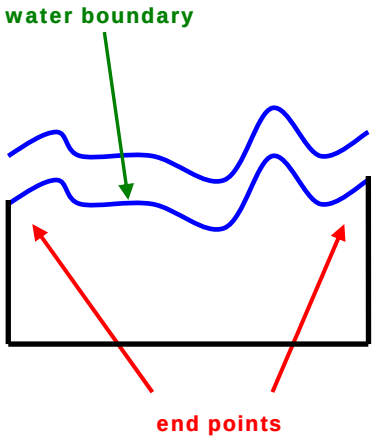

Figure 45: End points on a water boundary

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Where water body has moved after earlier survey (application of rule 6.7(a))[25]

- Where the current physical edge of the water body does not coincide with the existing documentary water boundary (eg as a result of avulsion or artificial diversion), this existing water boundary becomes a fixed boundary and must be converted to right-line boundaries [r 6.7(a)(i)].
- An exception to the right lining requirements is where the boundary is permitted to be adopted as a class C boundary, in which case it becomes an irregular boundary which is fixed in position [r 6.7(a)(ii)].
- Water boundaries or irregular boundaries that have been converted to right-lines must be defined by survey [r 6.2(a)(iii)] and, in the case of a class A boundary, must be marked on the ground [r 7.1(c)]. Only class A and B boundaries are required to be witnessed.

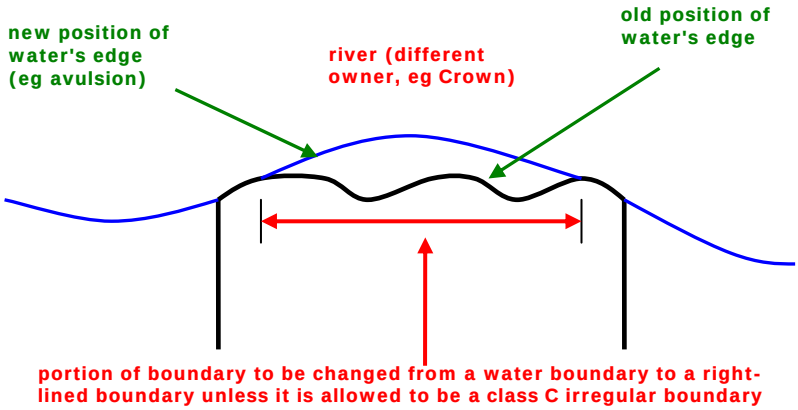

Figure 46: Example where the boundary and the water's edge no longer coincide

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[25] text changed to clarify interpretation of rule 6.7(a)

Where accretion applies to a water boundary (application of rule 6.7(b)(i))[26]

- Where entitlement to accretion beyond the water boundary is not being claimed, the documentary water boundary may be adopted as a water boundary in its former position [r 6.7(b)(i)].
- Because the boundary remains as a movable water boundary, any entitlement to accretion can be applied for at a later date.

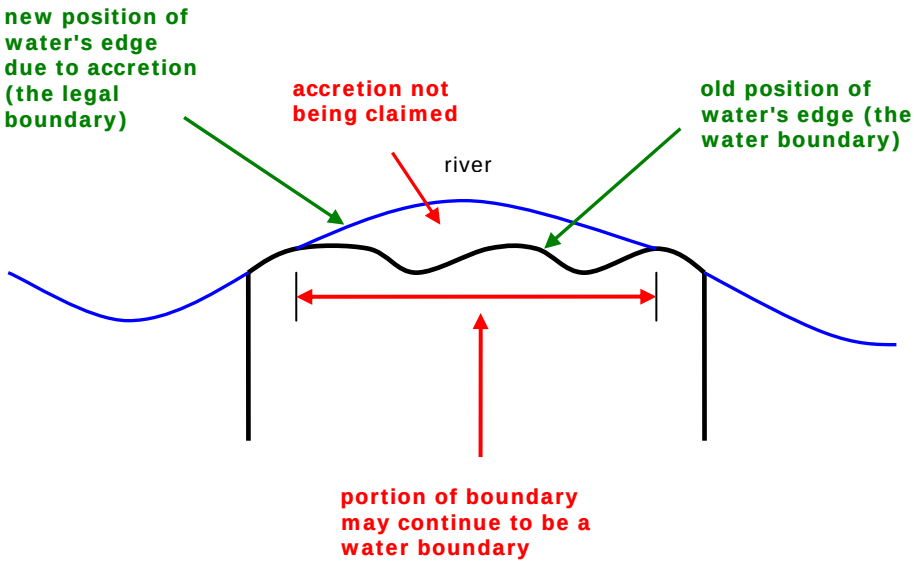

Figure 47: Accretion not being claimed

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[26] text changed to clarify interpretation of rule 6.7(b)

Where *'usque ad medium filum aquae'* is not claimed (application of rule 6.7(b)(ii))[27]

- Where the *usque ad medium filum aquae* presumption in relation to a water boundary is available but is not being claimed, then the documentary water boundary may be adopted as a water boundary in its former position [r 6.7(b)(ii)].
- Because the boundary remains as a movable water boundary, any entitlement to AMF rights can be applied for at a later date.

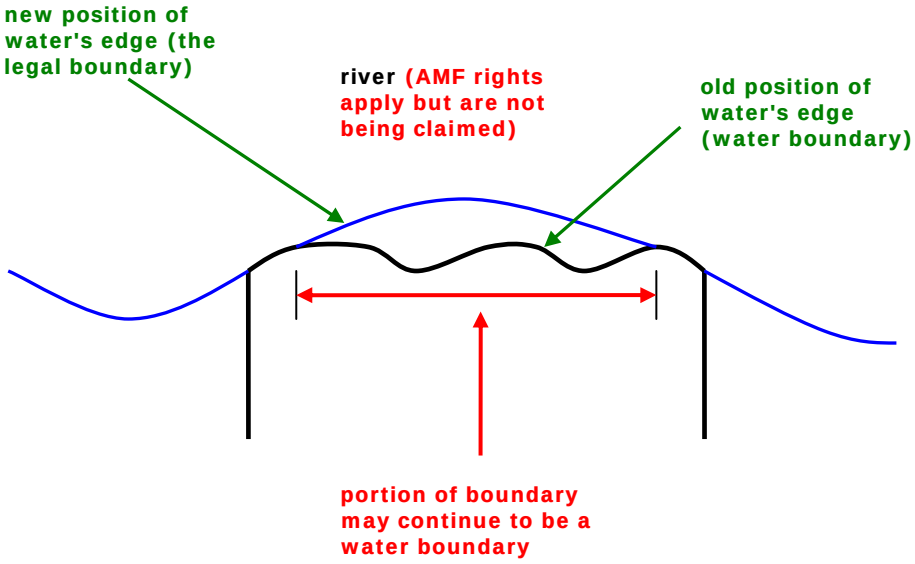

Figure 48: *Usque ad medium filum aquae* not claimed

[27] text changed to clarify interpretation of rule 6.7(b)

41. Irregular boundaries

Rules relating to irregular boundaries

6.6 Irregular boundary

Where new irregular boundaries are permitted

New irregular boundaries are only permitted in the case of:

- a landward boundary of an esplanade strip or movable marginal strip [r 6.6(c)],
- an existing water boundary that bounds a parcel of land that is to become part of an adjoining water body [r 6.7(c)]. Examples where this occur include parcels of erosion (refer to Erosion and residue parcels above), and common marine and coastal areas (refer to Residue parcels and common marine and coastal area above and Where land is to vest under ss 237A or 239(1)(c) RMA 1991 below), or
- an existing water boundary where the margin of the water body has moved but the documentary boundary has not moved and the boundary meets the criteria for class C boundaries [r 6.7(a)(ii)].

Requirements where irregular boundaries are converted to right-lines

Boundaries that have been converted to right-lines must be defined by survey [r 6.2(a)(iii)] and in the case of a class A boundary, they must be marked on the ground [r 7.1(c)].

Adequacy of definition where irregular boundaries are converted to right-lines

- The position of an existing irregular boundary is often defined by offsets from an adjoining water boundary.
- In many cases the irregular boundary is depicted at a scale that is not sufficiently accurate for determining the location of the new fixed right-line boundary.
- In these circumstances the boundary position may need to be determined from original field notes (if available) or by some other method, rather than copied directly from the existing CSD diagrams.

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Examples of existing irregular boundaries

The majority of existing irregular boundaries in the cadastre are associated with older surveys where reserves or roads are offset from the edge of waterways or roads that divide large rural parcels.

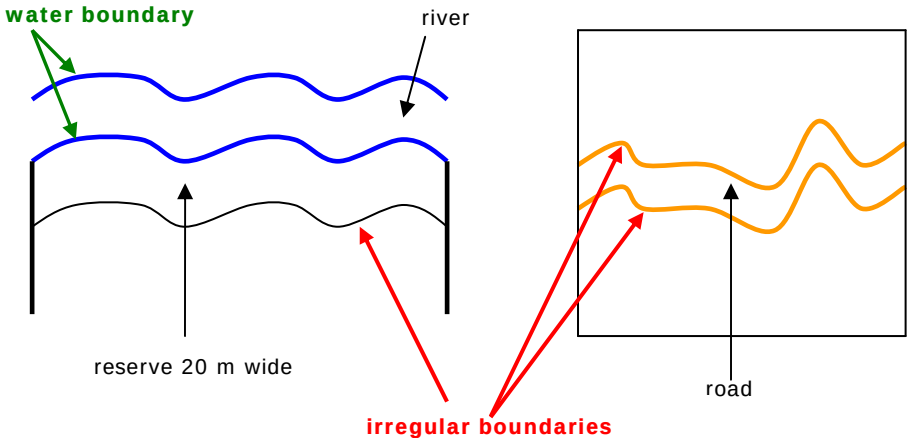

Figure 49: Irregular boundaries

When existing irregular boundaries may remain

- Existing irregular boundaries may remain where the boundary is able to be adopted as class C (refer to the conditions in rule 6.6(b)(ii)) or accepted as class D (refer to the conditions in rule 6.6(b)(i)). In all other cases, an existing irregular primary parcel boundary must be converted to right-lines [r 6.6(b)].
- Note, irregular boundaries may remain for residue and balance parcels [r 6.3(b)][28].

[28] text changed to clarify interpretation of rule 6.3(b)

42. Permanent structure boundary

Rules relating to permanent structure boundaries

6.9 Permanent structure boundary

Examples of permanent structure boundaries

- A permanent structure is a building or recognisable physical structure that is likely to remain undisturbed for 50 years or more. Structures of this nature are therefore substantially anchored in place and made of a durable material.
- A permanent structure boundary does not necessarily follow the physical shape of the permanent structure but must have some description that unambiguously relates the boundary to the permanent structure.
- Historically, wooden fences have been used to define the extent of some non-primary parcels. Unless there is some permanence associated with the fence (eg a concrete footing) such examples will generally not comply with the definition of permanent structure in rule 2.

Unit to be defined in relation to a building[29]

- A principal unit must contain a building or part of a building or be contained in a building. Note, the unit does not need to be bounded by the physical shape of that building (s 7 of the Unit Titles Act 2010).

  This requirement contrasts with the former Unit Titles Act 1972 where a unit could be a defined envelope of air space.
- An exception to this is a principal unit that is a car park.

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[29] text changed to clarify application of legislation

Permanent structure boundary, continued

Where a permanent structure boundary coincides with primary boundary

- Where a permanent structure coincides with the underlying primary parcel boundary, the boundary of the new non-primary parcel is to be the same form of boundary as the primary parcel (this means that the primary parcel boundary is used to define the new non-primary parcel)[30]. In this case, the relationship between the permanent structure and the new non-primary parcel boundary must be clear and unambiguous [r 9.6.15(a) and r 10.4.10(a)].
- Note, a permanent structure boundary must not be used to define the extent of a primary parcel [r 6.9].

Reduced levels for unit development only for stratum boundary

- Historically, a reduced level was required to define the upper or lower limit of a unit in a unit development. A reduced level is now only required where the vertical extent of a unit is defined by a stratum boundary [r 6.8(a)].
- A reduced level must not be used where the boundary is a permanent structure boundary [r 9.6.15(a) and r 10.4.10(a)].
- Note, a CSD may include both permanent structure boundaries and stratum boundaries, but they must be for different boundaries[31].
- Where a new unit or easement boundary is to coincide with an existing stratum boundary, this existing stratum boundary must be used. In most cases, this existing boundary may be adopted (refer to Accuracy of adoptions when 'defining by adoption' and Form of boundary where boundaries coincide or are in common)[32].

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[30] text changed to clarify interpretation of rule 6.9

[31] text changed to clarify interpretation of rule 6.9

[32] text changed to clarify interpretation of rule 6.4

Permanent structure boundary, continued

Easement using a permanent structure boundary[33]

- The use of a permanent structure boundary for an easement is appropriate only where the use of the right is related to the structure [r 6.9(a)(iv)].
- Examples include a sewage or water easement that runs from a permanent structure (building) to a manhole or to the road boundary and when the structure is removed, the easement becomes redundant. In these cases, the permanent structure may define the horizontal extent and/ or the vertical extent.
- A permanent structure within a parcel must not be used to define an easement that serves another parcel.

Using an existing lease boundary for new parcel boundary[34]

- In the case of a subsequent stage of a cross lease development or where part of an existing cross lease development is being changed, the following may be applied:
  - A boundary of a new lease parcel may be an adopted boundary where it is in common with an abutting existing lease parcel. This is providing the abutting lease parcel, its appellation, and its land transfer registration is being retained.

    The new CSD must depict the boundary in the same manner as the original CSD and reference this CSD.
  - A new restrictive area parcel may also adopt an abutting existing lease parcel boundary in similar circumstances.
- In respect to parcel identifiers in staged developments, refer to Appellations on staged cross lease developments and Appellations for 'common area' on a cross lease development above.

continued on next page

[33] text changed to clarify interpretation of rule 6.9(a)(iv)

[34] text changed to clarify interpretation of rule 6.4

Using an existing restrictive area boundary for new restrictive area parcel[35]

In the case of a subsequent stage of a cross lease development or where part of an existing cross lease development is being changed, the following may be applied:

- Where the boundary of a new restrictive area is a permanent structure boundary, rule 6.9(b) (how this boundary type can be used), rule 9.6.9 (Diagram of Survey detail and accuracies) and rule 10.4.7 (Diagram of Parcel detail) are particularly specific.
- In respect to existing boundaries:
  - a boundary of a new restrictive area parcel may be an adopted boundary where it is in common with an abutting existing restrictive area parcel and that boundary complies with the relevant Rules. In this case, the new CSD must reference the source CSD. This is illustrated by the wooden fence in the example in Figure 50: Use of existing restrictive area boundaries below.
  - where the existing boundary does not comply with the Rules, the boundary must be re-established in the same position and be in terms of the relevant Rules [r 6.2(a)(vii)]. In this case, the survey report must outline the decisions made and information used to define this boundary [r 8.2(a)(ix)]. This is illustrated by the offset dimensions shown in blue in Figure 50: Use of existing restrictive area boundaries below.
  - where the surveyor decides not to re-establish the boundary in the same position, the boundary becomes a new boundary. Where it is not obvious that the boundary is either a new or a re-established boundary, the survey report must clarify the situation [r 8.2(a)(ix)].
- Note, that an abutting existing lease boundary may be used as a new restrictive area boundary (refer Using an existing lease boundary for new parcel boundary above).
- In respect to parcel identifiers in staged developments refer to Appellations on staged cross lease developments and Appellations for 'common area' on a cross lease development above.

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[35] text changed to clarify interpretation of rule 6.4

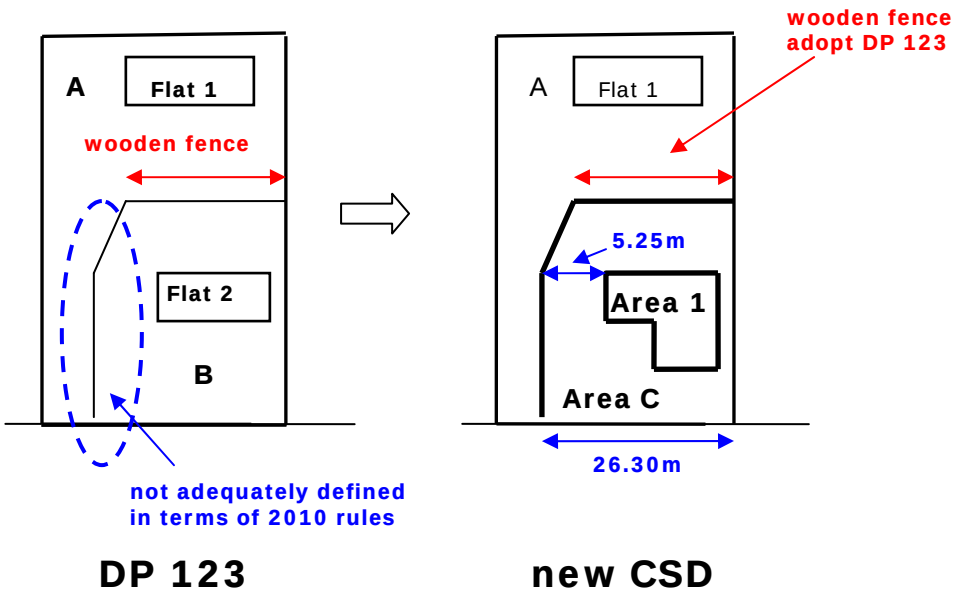

Figure 50: Use of existing restrictive area boundaries

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Where permanent structure boundary follows permanent structure

The boundary may follow a described part of a permanent structure [r 6.9(b)(i)].

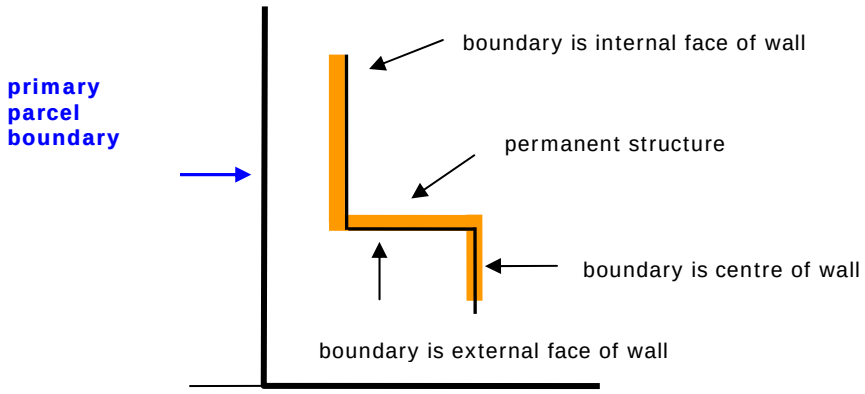

Figure 51: Where a boundary follows various parts of a permanent structure

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Where permanent structure boundary is between points

The boundary may be a straight line between clearly identified points on the interior or exterior of a permanent structure [r 6.9(b)(ii)].

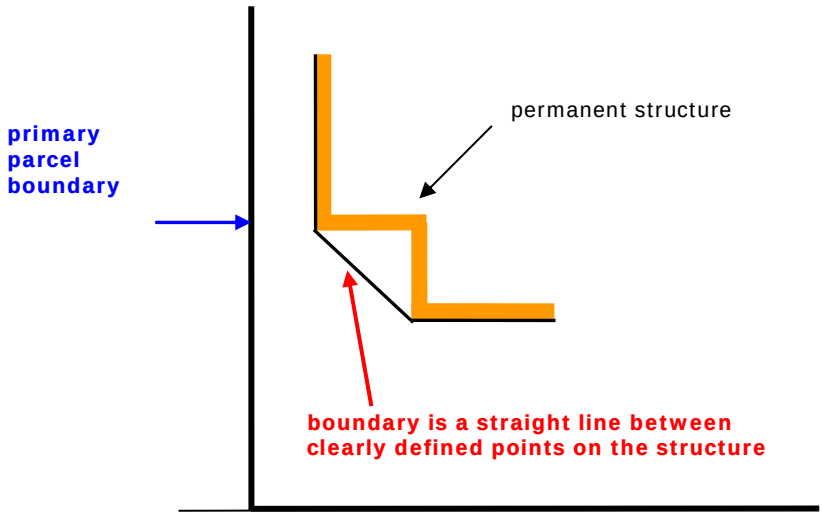

Figure 52: Where a boundary is a straight line between points

Where permanent structure boundary is between offset points

- The boundary may be a straight line connecting boundary points located from clearly identified points on the interior or exterior of a permanent structure [r 6.9(b)(iii)]. This is illustrated in Figure 53 below.
- These boundary points must be no more than 20 m from the permanent structure.

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Where boundary is horizontally offset from structure

The boundary may be:

- at a constant offset from a clearly identified interior or exterior part of a permanent structure [r 6.9(b)(iv)], or
- a surface unambiguously located from clearly identified points on the interior or exterior of a permanent structure [r 6.9(b)(v)].

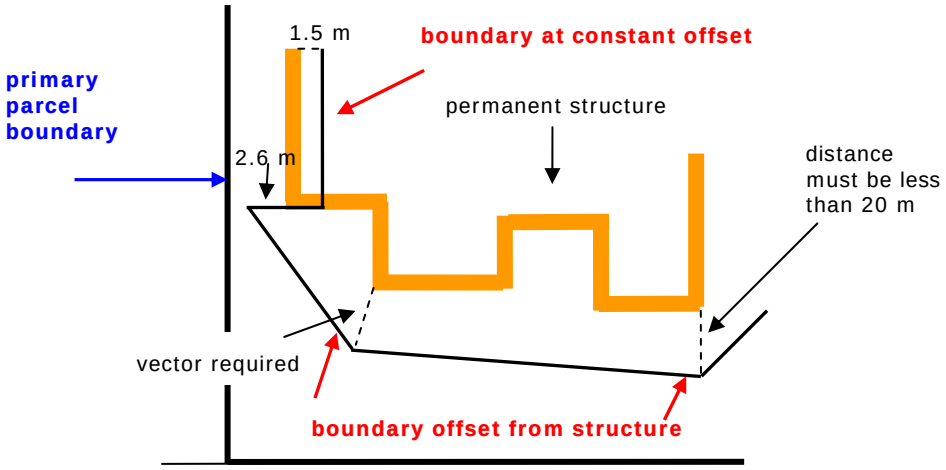

Figure 53: Where a boundary is offset horizontally from a permanent structure

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Where boundary is vertically offset from structure

The boundary may be:

- offset from a clearly identified interior or exterior part of a permanent structure [r 6.9(b)(iv)]. An example of this is the use of vertical offsets above or below a permanent structure.
- a surface located from clearly identified points on the interior or exterior of a permanent structure [r 6.9(b)(v)].

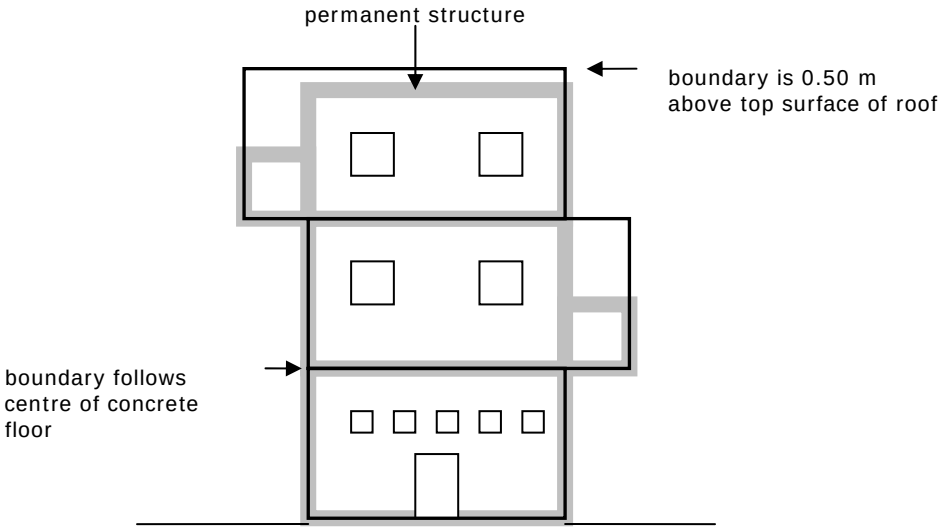

Figure 54: Where a boundary is offset vertically from a permanent structure

Boundary definition

43. Overview

Introduction to the requirements relating to boundary definition

To ensure that there are no disputes as to the extent of ownership of interests, it is essential that the boundaries that confine or divide two contiguous estates are defined appropriately.

This section explains the rules that relate to the evidence and process required to be taken into account in defining boundaries.

Links to categories of boundary definition, defined by survey and duty of surveyor in the guide

This section contains the following topics:

44. Types of boundary definition

Rules relating to categories of boundary definition

6.2 Boundaries to be defined by survey

6.3 Acceptance of a boundary

6.4 Boundaries defined by adoption

Three categories of definition

The Rules specify three types of boundary definition. Boundaries must be:

- defined by survey (refer to Boundaries to be defined by survey below)
- defined by adoption (refer to Boundaries defined by adoption below)
- accepted (refer to Accepted boundaries below).

Application of boundary definition categories

- New boundaries must be defined by survey.
- Some existing boundaries must be defined by survey while others may be defined by adoption or accepted.
- Boundaries defined by adoption must meet the applicable boundary accuracy standards while boundaries that are permitted to be accepted do not have to meet those standards.

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Method to determine category of boundary definition

The following is one way of determining the appropriate category of definition:

- Identify the boundary points that are permitted to be accepted under rule 6.3 (refer to Accepted boundaries below).
- For each boundary point that cannot be accepted, identify whether any of the provisions in rule 6.2(a) require the point to be defined by survey. In particular, note sub-clause (iv), which applies to existing boundary points on class A boundaries (refer to Boundaries to be defined by survey below).
- Any points that are not permitted to be accepted or are not required to be defined by survey, may be defined by adoption (refer to Boundaries defined by adoption below).

Any boundary can be defined to a higher category if the surveyor chooses.

Defined by survey only applies to current survey

A point 'defined by survey' by an earlier survey must not automatically be assigned that same category by a new survey. Each time an existing boundary point is used as part of a new survey, the appropriate category of definition must be reconsidered.

CSD must identify category of definition

The CSD will need to indicate whether a boundary point is:

- defined by survey,
- defined by adoption, or
- accepted.

45. Boundaries to be defined by survey

Rules relating to define by survey

6.1 Duty of surveyor when defining a boundary by survey

6.2 Boundaries to be defined by survey

Duty of surveyor when defining by survey

Defined by survey must be considered in conjunction with the requirements of rule 6.1 (Duty of surveyor when defining a boundary by survey).

New boundaries and points to be defined by survey

New boundaries and boundary points to be defined by survey include:

- all new water boundaries or new irregular boundaries [r6.2(a)(i)]
- all new boundary points [r 6.2(a)]. This applies to new boundary points on both primary and non-primary parcels.
- all existing irregular boundaries converted to right lined boundaries [r 6.2(a)(iii)]
- most existing Class A boundary or boundary points on a new primary parcel that is less than 0.4 ha. The exception is where all the boundaries of a parcel have previously been defined as primary parcel boundaries on approved CSDs, are right lines or arcs and all boundary points meet the accuracy standards in rule 3.3.1(a)(ii).
- any existing boundary point that is being marked on the survey [r 6.2(a)(v)]
- boundaries or boundary points subject to conflict, limitations as to parcels, adverse possession, interim titles, or previously defined by computed datasets under the Māori freehold land project [r 6.2(a)(vi-ix).

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Boundaries to be defined by survey, continued

Class A parcels under 0.4 ha to be defined by survey[36]

- The requirement to define by survey existing class A boundary points on a primary parcel less than 0.4 ha is applicable to all surveys (including legalisation surveys) unless the exception criteria in rule 6.2(a)(iv)] apply.
- The requirement to define by survey applies irrespective of how old or recent the underlying survey is noting that with a recent survey the location of witness marks is likely to provide good evidence.
- Boundary points that are required to be defined by survey may not need to be marked (refer to 'Defining by survey' and requirement to mark boundary points below).
- For information on the exception criteria in rule 6.2(a)(iv), refer to Where class A parcels under 0.4 ha may be defined by adoption below.

Rural parcels abutting class A parcels

- The requirement to define by survey under rule 6.2(a)(iv) only applies to boundaries of the parcels under survey and not the abutting parcel boundaries.
- Where boundaries of a rural parcel include existing boundaries that are class A, the class A boundaries may be defined by adoption providing they comply with the applicable class A accuracy standards [r 3.3.1(a)(ii)].

Right-lining existing water and irregular boundaries

An existing irregular boundary that has been converted into one or more right-line boundaries must be defined by survey [r 6.2(a)(iii)]. The requirement to right-line an irregular boundary is specified in rule 6.6(b). The requirement to right-line a water boundary is specified in rule 6.7(a)(i).

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[36] text changed to clarify interpretation of rule 6.2(a)(iv)

Boundaries to be defined by survey, continued

Risk of overlap with the boundaries of underlying parcels

- The relationship between new and existing boundaries must be determined correctly [r 6.1(c)]. To establish that relationship, the underlying parcel boundaries must be sufficiently defined.
- In some cases, boundaries may be defined by adoption [r 6.4] or accepted [r 6.3]. Where there is a risk of overlap, the existing boundary must be defined by survey [r 3.3.2 and r 3.4(a)].

Accuracy of non-primary boundaries upon resurvey

Where primary parcel boundaries are resurveyed to meet the accuracy standards, any existing non-primary boundaries must also be resurveyed to meet those standards (refer to Boundary accuracy where non-primary boundary coincides with class C or D primary parcel above).

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Primary parcel boundaries 'defined by survey' must be witnessed

All primary parcel boundary points defined by survey, including class A points where required by rule 6.2(a)(iv), must be witnessed [r 7.3.1(a)].

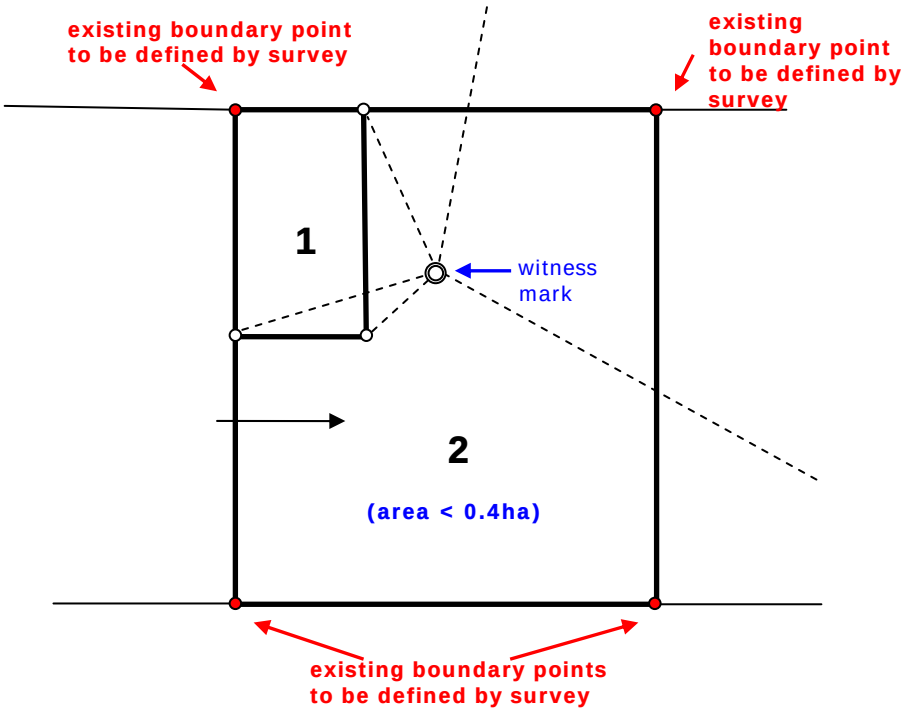

Figure 55: boundary points to be defined by survey in class A

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Boundaries to be defined by survey, continued

Conflict in boundaries to be defined by survey

- Conflict occurs where there are unresolved differences in the cadastral records, title records or evidence on the ground (refer to definition of 'conflict').
- Rule 6.2(a)(vi) requires every boundary subject to conflict to be defined by survey, unless it is permitted to be accepted by rule 6.3 or permitted to be class C in terms of rule 3.2.3.

Removing limited titles and interim titles requires 'defined by survey'

- Where limitations as to parcels is being uplifted, rule 6.2(a)(viii) requires the boundary points on the parcel to be defined by survey.
- Where the interim nature of a Hawke's Bay interim title is being removed, rule 6.2(a)(x) requires the boundary points on the parcel to be defined by survey.

Resurvey of computed Māori land CSDs requires 'defined by survey'[37]

- Rule 6.2(a)(xi) requires each point on the boundary which was created on a CSD previously approved under *LINZS10000: Interim standard for computed cadastral survey datasets for Māori freehold land,* to be defined by survey unless it can be accepted. These boundaries therefore cannot be 'defined by adoption' unless they have been first properly defined.
- Where the boundaries are defined by survey, while the boundaries may not need to be marked [r 7.1(a)(ii)], the boundary points must be witnessed [r 7.3.1(a)].
- Computed cadastral survey datasets were prepared under *LINZS10000: Interim standard for computed cadastral survey datasets for Māori freehold land*. They were permitted where the Māori Land Court made an order to partition land and provisional land title registration was considered desirable via a Māori land CSD without a field survey.
- Where a boundary marking survey is to be carried out, refer to Boundary marking surveys and Māori land provisional titles below.

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[37] text changed to clarify interpretation of rule 6.2(a)(xi)

Boundaries to be defined by survey, continued

'Defining by survey' and requirement to mark boundary points

The requirement to define a boundary point by survey does not necessarily mean that the point must be marked. The requirement to define a boundary point by survey [r 6.2] and the requirement to mark a boundary point [r 7.1] are different issues that should be dealt with separately.

46. Duty of surveyor when boundary to be defined by survey

Rules relating to duty of a surveyor

6.1 Duty of surveyor when defining a boundary by survey

Evidence relevant to survey definition to be considered by surveyor

Rule 6.1(a) requires a surveyor to 'gather all evidence relevant to the definition of the boundary and its boundary points'. Examples of relevant evidence may include:

- documentary evidence - commonly survey and title records,
- physical evidence - commonly reliable survey marks and fixed structures or other occupational details on the site, and
- photographic, oral, or any other form of evidence that may have a legal relevance to the definition.

Enactments and rules of law to be considered by surveyor

- Rule 6.1(b) requires a surveyor to 'interpret that evidence in accordance with all relevant enactments and rules of law'.
- Relevant enactments include statutes, and subsidiary items including regulations, rules and rulings, particular to that survey. Common examples include, but are not limited to:
  - Cadastral Survey Act 2002
  - Land Transfer Act 1952
  - Conservation Act 1987
  - Te Ture Whenua Māori Act 1993
  - Surveyor-General's Rules and Rulings
  - RGL standards and guidelines.
- Other rules of law include common law precedent such as the 'hierarchy of evidence' and the 'doctrine of accretion and erosion' as well as case law (which includes judicial precedent and court decisions from individual cases).

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Duty of surveyor when boundary to be defined by survey, continued

Interpreting unmarked boundary points

Where the original CSD created a boundary point as an unmarked point, its witness mark and its relationship to that boundary point will normally determine the location of the boundary. This principle continues to apply even in the case where the boundary point has been subsequently marked at a later date.

Interpreting accuracy of vectors

- Historically, there was often no difference in the accuracy of **traverse** vectors and **boundary** vectors as boundaries were often traversed. Adopted boundary vectors were therefore usually used for the purpose of defining a boundary position.
- Adoption of boundary vectors created under the 2010 rules may not be suitable as the boundary accuracy standard for boundary vectors [r 3.3.1] is less than the survey accuracy standard [r 3.1].
- To reliably re-establish a boundary position, the network of non-boundary marks will normally provide the most accurate solution.

Interpreting 'old peg no record'

- The evidential value of 'old peg no record' has been clarified in the Rules by the inclusion of definitions for **old survey mark** and **old boundary mark**.
- This means that, where a mark is found but its presence is not already recorded on a CSD that has been integrated into the cadastre, this mark must be treated as a new survey mark with little evidential value beyond that of information on occupation.

Duty to correctly locate boundary

Rule 6.1(c) requires a surveyor to 'use that evidence to correctly locate the boundary and boundary points in relation to other boundaries and boundary points'. This requirement applies to new boundaries as well as to existing boundaries and therefore the correct relationship between old and new boundaries.

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Duty of surveyor when boundary to be defined by survey, continued

Witness marks required for primary points 'defined by survey'

Rule 7.3.1(a) requires each boundary point on a primary parcel boundary that is defined by survey to have at least one witness mark and the accuracy between the boundary point and the witness mark must meet the accuracy tolerances of rule 3.6.

Level of evidence in CSD when defining by survey

- Where a new boundary point, including a non-primary parcel boundary point is unmarked, the vector information in the CSD is the evidence of the boundary point location.
- For existing boundary points, a surveyor will need to exercise judgment as to the extent of evidence necessary to provide the highest level of confidence that a boundary position has been correctly defined by survey.
  - In the case of an existing boundary point, the best evidence is normally an undisturbed old boundary mark.
  - Irrespective of this, where the underlying survey is considered to be adequate and connection has been made to that survey, the use of adoptions (either along the boundary or from other non-boundary marks into the boundary) may be judged by the surveyor to adequately **define by survey** the boundary point. In other words, the evidence is considered, in the professional opinion of the surveyor, to be sufficient to ensure that a mark **could** have been reliably placed at the boundary position indicated by the adopted information, had the surveyor chosen to do that. The boundary point is 'defined by survey', the proof is by the use of adoptions.
- In some cases the adopted information cannot be relied upon, as it either does not comply with the accuracy standards or there is more substantive evidence. The relevant evidence here could be the resultant re-calculations[38].

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[38] text changed to clarify interpretation of rule 8.1(d)

Duty of surveyor when boundary to be defined by survey, continued

Boundary point purpose and mark state information in CSD

To ensure the level of evidence used by the surveyor is clearly recorded in a CSD, the CSD will need to indicate the boundary mark purpose as 'defined by survey' and indicate the mark state as:

- 'old' where a reliable old boundary mark is found,
- 'new' where an existing boundary point is marked, or
- 'adopted' where an existing boundary point is not marked.

47. Boundaries defined by adoption

Rules relating to 'define by adoption'

6.4 Boundaries defined by adoption.

Application of term 'defined by adoption'

'Defined by adoption' applies only to a boundary and is a term used to describe the quality of the definition of that boundary. This should not be confused with the term 'adopt' which has a more general meaning and which relates to the use of existing vector information.

Defining by adoption a right line or irregular boundary - duty of surveyor

Where a surveyor is permitted to define by adoption a right line or irregular boundary, they need only ensure that the adopted work meets accuracy tolerances and that there is no known evidence of 'conflict'. It is unnecessary for the surveyor to search for all the old marks or fix occupation to discover if conflict exists along this boundary.

Defining by adoption a water boundary - duty of surveyor

- Because a water boundary is ambulatory, the surveyor must not assume that the documentary position is fit for adoption. The surveyor must compare the current ground position with the documentary position to determine whether it is appropriate to adopt the boundary position.
- Evidence of erosion or inaccurate adoptions (taking into account the accuracy specifications in r 3.4) may result in the boundary having to be re-surveyed.

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Boundaries defined by adoption, continued

Accuracy of adoptions when 'defining by adoption'

- A boundary defined by adoption is not subject to the same definition requirements as a boundary defined by survey. However, the boundary must meet the relevant accuracy standard for either right-line boundaries [r 3.3] or water boundaries and irregular boundaries [r 3.4].
- The position of a boundary point which is 'defined by adoption' will be determined by the use of adopted vectors.
- The position of a boundary point must not be 'defined by adoption' if the adopted vectors fail the boundary accuracy standards, notwithstanding that they meet the survey accuracy tolerances in place at the time of the original survey.

Where class A parcels under 0.4 ha may be defined by adoption

- Class A boundary points on a primary parcel that is less than 0.4 ha may be defined by adoption only where **all** the boundaries in the parcel:
  - are boundaries defined in approved CSDs including those CSDs that have not deposited. This includes boundaries that are in approved CSDs that have been superseded and are no longer existing boundaries in the spatial cadastre, and.
  - are right lines or arc boundaries, and
  - meet the accuracy standards in rule 3.3.1(a)(ii).
- Examples where the criteria could be met include:
  - two or more existing parcels being combined to create a single new parcel, or
  - a new parcel having the same boundaries as the extinguished parcel. This will occur when the purpose of the CSD is to create a new appellation for an existing parcel or where an amalgamation condition is being severed.
- For the CSD type where all boundaries are adopted refer to Current CSD type where data is adopted below.
- A new boundary calculated between existing boundary points does not meet the criteria in rule 6.2(a)(iv) and therefore all boundaries of that parcel must be defined by survey (refer to Class A parcels under 0.4 ha to be defined by survey above)[39].

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[39] text changed to clarify interpretation of rule 6.2(a)(iv)

Boundary point purpose and mark state information in CSD

To ensure the level of evidence used by the surveyor is clearly recorded, the CSD must indicate the boundary mark purpose as 'defined by adoption' and the boundary mark state as 'adopted'.

Boundaries of underlying parcels may be 'defined by adoption'[40]

- Where a new non-primary parcel is to be created on an underlying parcel:
  - the existing underlying parcel boundaries that are in close proximity to, or coincide with, a new non-primary boundary may be defined by adoption or accepted [r 6.3 or r 6.4] (refer to Accuracy of non-primary boundaries upon resurvey above),
  - the accuracy between the new non-primary boundaries and these underlying boundaries must comply with rules 3.3.1 (class A or B), 3.2.3(b) (class C), or 3.2.4(b) (class D) as appropriate,
- Where the inaccuracies of the coincident or close underlying parcel boundaries are such that their relationship with new boundaries is unable to be determined to the required accuracy [refer r 3.3.2], the issue should be discussed with LINZ (Senior Advisor to the Surveyor-General). Alternative criteria will be considered.

[40] text changed to clarify interpretation of rule 3.3.1, 3.2.3, 3.2.4, 3.3.2, 6.3 and 6.4

48. Accepted boundaries

Rules relating to accepted boundaries

6.3 Acceptance of a boundary

Accepted boundaries are class D

All accepted boundaries are class D boundaries [r 3.2.4(a)].

Accuracy of adoptions for accepted boundaries

- Only an existing boundary can be accepted [r 6.3]. The accepted boundary and boundary points are not required to meet any accuracy tolerance [r 2] but the adopted information must be faithfully copied from the source CSD [r 8.4].
- Note that rule 8.4 enables an adoption to include a bearing adjustment[41].

Boundary point purpose and mark state information in CSD

- When a boundary is accepted, the surveyor must adopt the information from a CSD that has been integrated into the cadastre (or the estate record in some circumstances).

  In the normal case that adopted information would be:

  - the vectors that link the boundary points, and
  - the boundary points themselves.
- To ensure the level of evidence used by the surveyor is clearly recorded in a CSD, the CSD must indicate that the boundary point purpose is 'accepted' and the boundary point state is 'adopted'.

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[41] text changed to clarify interpretation of rule 8.4

Accepted boundaries, continued

Accepted water boundary[42]

Providing the critieria in rules 6.3(a)(i) or (ii) can be met, a water boundary may be accepted where the parcel:

- will be associated with a title that is limited as to parcels [r 6.3(a)(v)],
- will be associated with a Hawke's Bay interim title [r 6.3(a)(v)],
- is a balance parcel or residue parcel [r 6.3(b)].

Accepted irregular boundary[43]

- Providing the critieria in rules 6.3(a)(i) or (ii) can be met, an irregular boundary that is not dependent on the location of a water boundary may be accepted [r 6.3(a)(vi)].
- Examples include a fixed irregular boundary that:
  - was originally offset from from a water boundary as was the case of many landward roadside boundaries,
  - was formally a water boundary but has not been right-lined,
  - follows the centreline of a water course.

Accepted residue parcel boundaries

The boundaries of a residue parcel that are not common with another new primary parcel on the survey may be accepted [r 6.3(b)]. There are examples of this in Residue parcel above.

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[42] text changed to clarify interpretation of rule 6.3(a)(vi)

[43] text changed to clarify interpretation of rule 6.3(a)(vi)

Disappearing water boundaries may be accepted boundaries

- Where a primary parcel defines an extent of land that is to be incorporated into an adjoining water body, the existing water boundary that abuts the water body will disappear. This disappearing boundary may be accepted [r 6.3(b)] and must be an irregular boundary [r 6.7(c)].

- Examples include the disappearing:

  - existing water boundary of a residue parcel where there is erosion [r 6.3(b)] (refer to Accretion and erosion parcels above),

  - seaward boundary of a residue parcel where land is part of the common marine and coastal area (refer to Residue parcels and common marine and coastal area above)[44].

  - seaward boundary of a primary parcel of land that becomes part of the common marine and coastal area (under s 237A Resource Management Act 1991). This is illustrated below where land is below MHWS and adjoining an esplanade reserve [r 9.7(c)]. See also Where common marine and coastal area under s 237A of the RMA Act 1991 below.

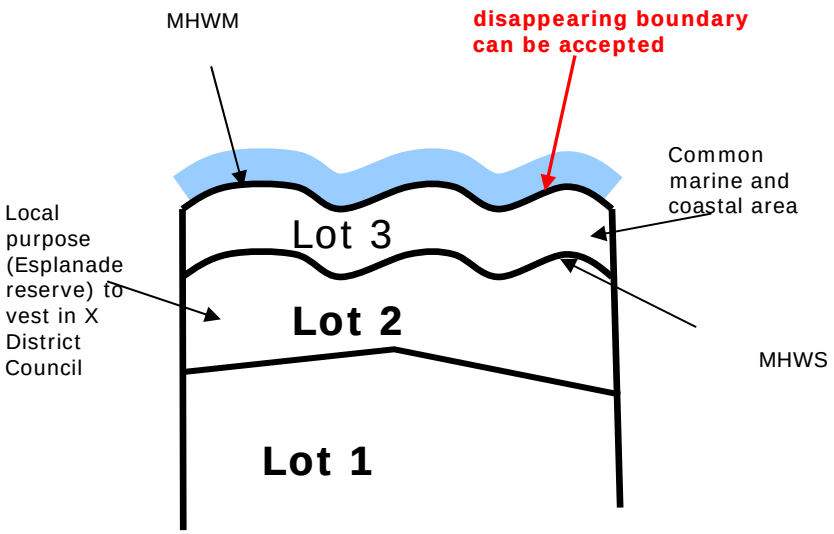

Figure 56: Example of a disappearing boundary where common marine and coastal area

[44] text changed to clarify application of legislation

49. Limited as to parcels boundaries

Deficiencies in a limited title

- A limited as to parcels title signifies that the definition of the boundaries of the parcel was not adequately determined at the time of issue of the title under a Land Transfer Act.
- The Registrar-General of Land requires the position of the boundaries of the land to be properly defined on a cadastral survey dataset before a full title (ie one that is not limited as to parcels) can be issued.

Evidence of occupation to remove limitations

- Where the survey is to enable the removal of limitations from a limited title, all existing and new boundary points of the parcel must be defined by survey [r 6.2(a)(viii)].
- When defining a boundary by survey, a surveyor must gather, interpret, and use all evidence relevant to the definition of that boundary [r 6.1]. The surveyor must consider all evidence of occupation and demonstrate in the CSD that no part of the land is held in occupation adverse to the registered proprietor.

Adverse occupation land to be a residue parcel

If a portion of the land of the parcel to be extinguished is adversely occupied and is not part of the land rightfully owned by the holder of the limited title, the portion must be a residue parcel.

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Limited as to parcels boundaries, continued

Survey requirements when uplifting limitations

To demonstrate that a survey correctly defines land in a limited title and that none of the land is in occupation adverse to the registered proprietor:

- all boundaries and boundary points on the parcel must be defined by survey [r 6.2(a)(viii)],
- where practicable, boundary points must be marked unless a reliable boundary mark is already in place [r 7.1(b)],
- information about occupation and physical features must be provided in a diagram [r 9.5(b)(iii)],
- the survey report must include the fact that the survey facilitates the uplifting of limitations [r 8.2(a)(i)], and
- the survey report must include information about the decisions made in determining the location of the boundaries [r 8.2(a)(ix)].

Land transfer survey of class A parcel less than 0.4 ha where limited title[45]

- For a land transfer CSD where the title is limited and all the boundary points of a parcel have been defined by survey in terms of rule 6.2(a)(iv), it is presumed limitations as to parcels will be uplifted.
- Occupation adverse to the registered owner must be dealt with and would normally be depicted as a residue parcel (refer to Adverse occupation land to be a residue parcel above).

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[45] text changed to clarify interpretation of rule 6.2(a)(iv)

Limited as to parcels boundaries, continued

Legalisation survey of class A parcel less than 0.4 ha where limited title[46]

- For a legalisation CSD where the title is limited and all the boundary points of a parcel subject to a legalisation action have been defined by survey in terms of rule 6.2(a)(iv):

  - limitations as to parcels will not apply to a new parcel subject to the legalisation action. Occupation of the parcel adverse to the registered owner must be dealt with in the legalisation process.

  - for the parcels of land not subject to the legalisation (normally the land that will remain in current ownership), limitations as to parcels will not be uplifted.

    The existing boundaries and boundary points must be defined by survey according to the controlling principles of survey but given the title will remain limited, the issues relating to adverse possession (ie land adversely occupied) must not be taken into account when defining these existing parcel points and boundaries.

    On registration of the Gazette, LINZ will automatically issue to the registered proprietors a new limited title for the land that remains in their ownership.

- Where limitations are removed at a later date on a land transfer CSD, the issues associated with adverse possession will be addressed.

continued on next page

[46] text changed to clarify interpretation of rule 6.2(a)(iv)

Limited as to parcels boundaries, continued

Legalisation survey of parcels 0.4 ha and larger where limited title[47]

- For a legalisation CSD where the title is limited, limitations as to parcels will not apply to the parcel subject to the legalisation action. Occupation of the parcel adverse to the registered owner must be dealt with in the legalisation process.
- For the parcels of land not subject to the legalisation action (normally the land that will remain in current ownership), limitations as to parcels will not be uplifted.

  The existing boundaries and boundary points must be defined in accordance with rule 6.2 (boundaries to be defined by survey), rule 6.3 (acceptance of a boundary), or rule 6.4 (boundaries defined by adoption).

  Where a boundary or boundary point is defined by survey, the controlling principles of survey must be used but given the title will remain limited, the issues relating to adverse possession (ie land adversely occupied) must not be taken into account.

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[47] text changed to clarify interpretation of rule 6.2(a)(iv)

Limited as to parcels boundaries, continued

Level of survey definition for limited titles

- The Rules provide for boundaries and boundary points to be defined by survey [r 6.2], defined by adoption [r 6.4], or accepted [r 6.3].
- Where the existing title for a parcel is limited, the limitations can only be uplifted if all the boundary points are defined by survey.
- New parcels which have boundaries or boundary points that are defined by adoption or accepted will not be sufficiently defined to enable the uplifting of limitations from a title.
- Where the title is to remain limited, the annotation 'Limited as to parcels' must be on the Diagrams of Survey and Title [r 9.6.11 and r 10.4.8].

Where boundaries have already been defined on limited title

- In depicting a parcel to support the uplifting of limitations, the surveyor is demonstrating that none of the land is in occupation adverse to the registered proprietor.
- Adjoining surveys, irrespective of their age and quality, do not provide sufficient evidence on their own as to the correct definition of the subject land in a limited title.
- Each boundary point must be defined by survey [r 6.2(a)(viii)] and marked, where practicable, unless a reliable boundary mark is already in place [r 7.1(b)]. No boundary or boundary point is permitted to be defined by adoption or accepted.

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Limited as to parcels boundaries, continued

Boundary marking surveys and limited titles[48]

- Historically, a boundary marking (formerly 'redefinition') survey was not permitted in the case of title that is limited as to parcels [r 45 *Surveyor-General's Rules for Cadastral Survey 2002/2*]. The current Rules do not have this restriction and, in certain cases, allow a boundary marking survey where the title is limited.
- The point being marked must be:
  - defined by survey [r 6.2(a)(v)]. This means that all the relevant evidence (including evidence relating to long standing occupation) must be gathered and considered, and
  - already defined in an existing approved CSD; ie it must be an existing point.

    If, after taking into account the evidence, the position does not agree with that defined in the approved CSD, a boundary marking survey must not be carried out. If the new boundary position is to be recognised as authoritative, a full land transfer survey is required.
- For the appropriate type of boundary marking survey and CSD, refer to Survey types for boundary marking below.
- A boundary marking survey must not create a new parcel and must not be used to uplift limitations from a title.

Unit development where limited title[49]

Limitations as to parcels must be uplifted before a unit title CSD can be deposited [s 32(1)(a) of the Units Titles Act 2010].

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[48] text changed to clarify interpretation of rule 6.2(a)(v) and application of Land Transfer Act 1952

[49] text changed to clarify application of legislation

Alternative process where limitations as to parcels are being uplifted[50]

- Where limitations are being uplifted, the CSD must define the land so that the RGL and adjoining owners can be satisfied that no part of the surveyed land is held in adverse occupation.
- This means that the CSD in the first instance must define the boundaries by survey [r 6.2(a)(viii)], mark the boundary points [r 7.1(b)] and, in a diagram, depict the occupation in relation to the boundaries and boundary points [r 9.5(b)(iii)].
- The requirement to define by survey need not be complied with, to instead allow a boundary to be defined by adoption, providing:
  - the accuracy tolerances are met [r 3.3 and r 3.4],
  - there is no risk of boundary overlap [r 3.3.2],
  - the adjoining owner confirms in writing that they agree to the boundary as depicted in the CSD,
  - the land parcel is wholly or substantively occupied by the title holder. An example of substantive occupation is full occupation except for a strip between the physical occupation and the parcel boundary.
- The adjoining owner's consent must be within the CSD at time of lodgement and be referred to in the survey report. A recommended consent form is shown below (Figure 57: Consent form where uplifting limitations as to parcels). If another form is used, then it must contain the same information.
- By agreeing to the adopted boundary as depicted in the CSD, the adjoining owner is agreeing that (irrespective of the location of occupation) they are forgoing any potential claim of possession adverse to the surveyed land.
- To define by adoption means to adopt the documentary (previously surveyed) dimensions of the parcel. Note that where a boundary is permitted to be defined by adoption, rules 7.1(b) (boundary marking) and 9.5(b)(iii) (diagram of occupation) by default, will also not apply.
- A CSD may contain a mixture of boundaries that are defined by adoption and defined by survey.
- Where the title holder does not wholly or substantively occupy the land parcel, a case may be presented to LINZ (Senior Advisor to the Surveyor-General) for boundaries to be defined by adoption.

[50] text changed to clarify interpretation of rule 6.2(a)(viii) and application of Land Transfer Act 1952

Consent Form

Uplifting of limitations as to parcels without defining by survey

Person giving consent *Surname to be underlined*	**Capacity and interest of person(s) giving consent** *(eg Registered Proprietor(s) and CFR reference)*

Consent

The **Person(s) giving consent hereby accepts and consents** to the boundaries that are depicted on DP……. and are in common with CFR……..

This consent is given with the knowledge that these boundaries have been adopted from prior surveys (being ……..), may or may not coincide with the physical occupation of the land comprised in CFR ……and are not defined by survey.

Dated this	day of	20….

Attestation

	Signed in my presence by the Person(s) giving consent _____ *Signature of Witness* *Witness to complete in BLOCK letters (unless legibly printed)* **Witness name** **Occupation** **Address**
Signature [Common seal] of Person giving consent	

Figure 57: Consent form where uplifting limitations as to parcels

50. Diagram on transfer boundaries

Use of boundaries depicted on diagram on transfer

- A boundary point created on a diagram on transfer may be defined by survey, defined by adoption, or accepted according to the Rules in the same manner as other boundary points.
- Where there is conflict (eg the diagram information is ambiguous or one of the parcels cannot be defined without affecting the other), the parcel boundary must be defined by survey [r 6.2(a)(vi)] and marked [r 7.1(b)].

Boundary marking surveys and boundaries depicted on diagram on transfer

- A boundary position defined on a diagram on transfer may be reinstated, but cannot be treated as a boundary reinstatement survey because the boundary point has not been defined in an approved CSD [r 2]. This requirement applies even if the diagram in the transfer indicates that the position has been marked.
- This means that the survey must include a minimum of three or four witness marks [r 7.3.2(c)] and two PRMs [r 7.4.1(a)] and be a full survey (refer to Survey types for boundary marking below).
- The survey must be recorded in a 'full' CSD that records all the marks connected to by the survey and all the necessary information proving that the boundary point is correctly located. In Landonline the survey purpose is **boundary reinstatement - full CSD** (refer to Survey types for boundary marking below).

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Unit development where underlying boundary on a diagram on transfer

- A unit development is permitted where a boundary of the underlying parcel has been defined in a diagram on transfer providing:
  - the accuracy between any new permanent structure boundary points and underlying parcel boundary points comply with the accuracy specified in rule 3.5 wherever the boundaries are within 1 m for class A and 3 m for class B [r 3.5(c)] (refer to Accuracy of permanent structure boundaries close to another boundary above).
  - the accuracy between any new right-line boundary points and underlying parcel boundary points comply with the accuracies specified in rule 3.3.1.
- Where the location of the diagram on transfer boundary is not recorded in a CSD, the survey report could include supporting information (eg a calculation sheet) illustrating how the boundary was defined in relation to other boundaries and how the accuracy tolerances were met [r 8.2(a)(iii)].
- Where the specified accuracies are not able to be met, the underlying parcel boundaries must be defined by survey [r 6.2(a)(vi)].

51. Hawke's Bay interim title boundaries

Deficiencies in an interim title

- Under s 9 of the Land Transfer (Hawke's Bay) Act 1931, when both register and outstanding duplicate titles were lost or destroyed as a result of the Napier earthquake, any replacement titles were recorded as being inconclusive as to ownership. If the survey records and monuments supporting the survey were also destroyed, the reconstituted title was inconclusive as to description and delineation.
- Under s 12 of that Act, the interim title became conclusive as to ownership after six years. Thus registered ownership (fee simple and secondary estates and interests) were restored to full guaranteed status, but not the area or boundaries.

Evidence to uplift interim nature of title

Where the interim nature of a title is being uplifted for a parcel of land, all boundaries and boundary points on that parcel must be defined by survey, or have been defined by survey or its equivalent subsequent to the 1931 earthquake.

Class A parcel less than 0.4 ha and interim title

- The requirement to define by survey existing class A boundary points on a primary parcel less than 0.4 ha [r 6.2(a)(iv)] applies where there is an interim title. This also applies for legalisation surveys.
- It is presumed in these cases that the interim nature of a title will be uplifted.

Level of definition where title is interim title

- The Rules provide for boundaries and boundary points to be defined by survey [r 6.2], defined by adoption [r 6.4], or accepted [r 6.3].
- Where the existing title for a parcel is an interim title, this interim nature will only be uplifted if all the boundary points are being defined by survey, or have been defined by survey or its equivalent after the 1931 earthquake.

  The interim title will remain where boundary points have not been defined by survey or its equivalent after the 1931 earthquake..
- Where the land in a parcel will remain in an interim title, the annotation 'Hawke's Bay interim title' must be on the Diagrams of Survey and Title [r 9.6.11 and r 10.4.8].

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Hawke's Bay interim title boundaries, continued

Boundary marking surveys and interim titles[51]

- In certain circumstances, a boundary 'reinstatement' is permitted where the title is a Hawke's Bay interim title.
- The point being marked must be:
  - defined by survey [r 6.2(a)(v)]. This means that all the relevant evidence (including evidence relating to the interim title) must be gathered and considered
  - previously defined in an approved CSD, ie it must be an existing point.

    If after taking into account the evidence, the position does not agree with that defined in the approved CSD, a boundary marking survey must not be carried out. If the position is to be recognised as authoritative, a full land transfer survey is required
- A boundary marking survey must not create a new parcel and must not be used to uplift the interim nature of a title.

[51] text changed to clarify interpretation of rule 6.2(a)(v) and application of Land Transfer Act 1952

52. Earthquake affected boundaries

Rules relating to earthquake boundaries[52]

Where a survey includes the re-establishment of boundary points and boundaries which have been affected by movement due to the Canterbury earthquakes, refer to *LINZS65001 Rules for Cadastral Survey (Canterbury Earthquake) 2010*.

Guideline relating to rules on earthquake boundaries[53]

For a guideline to assist with the interpretation of the *Rules for Cadastral Survey (Canterbury Earthquake) 2010* refer to *LINZG65702 Guideline for Rules for Cadatral Survey (Canterbury Earthquake) 2010*.

[52] text changed to clarify interpretation of *LINZS65001 Rules for Cadastral Survey (Canterbury Earthquake) 2010*

[53] text changed to clarify interpretation of *LINZG65702 Guideline for Rules for Cadatral Survey (Canterbury Earthquake) 2010*

Ground marking

Introduction to the requirements relating to ground marking

New Zealand court decisions have established that the boundaries of a surveyed parcel are generally governed by the location of the marks in the ground.

This section explains the rules that relate to new ground marking, old marks and existing positions that are re-marked.

Links to new and old survey mark requirements in the guide

This chapter contains the following topics:

Non-boundary marks

53. Overview

Introduction to the requirements relating to non-boundary marks

It is essential that the framework of non-boundary marks and boundary points link together. This enables the boundary positions to be correctly reinstated in the future.

This section explains the rules that specify:

- the attributes and location of marks that make up the network of non-boundary marks, and
- the proximity of survey network marks to boundary points.

Links to non-boundary mark types, PRM and witness mark requirements in the guide

This section contains the following topics:

54. Non-boundary mark types

Types of non-boundary marks

Non-boundary marks are:

- permanent reference marks (PRMs),
- witness marks, and
- other marks used in the survey that are not boundary marks. These include 'traverse marks' and similar marks used to facilitate the survey.

Traverse marks

The Rules do not require the surveyor to place or use traverse marks. If such marks **are** used, they must be recorded in the CSD [r 9.6.2(a)] and meet the same accuracy requirements as PRMs and witness marks [r 3.1]. This is because they are treated as non-boundary marks.

55. Permanent reference marks

Rules relating to PRMs

7.4 Permanent marks

Attributes of PRMs

Permanent reference marks (PRMs) are required to have such physical attributes, and be placed in such locations that provide a reasonable assurance that they should remain undisturbed and useable for at least 50 years [r 7.4.3(b)].

Reponsibilities of surveyors regarding PRMs

- The rule only holds the surveyor to account where the mark's loss could have been reasonably foreseen at the time it was placed or used in the survey.
- Although existing marks (eg old iron spikes and tubes) may have been in the ground for a long time or appear to be substantive, they must be assessed as to whether they can be expected to survive another 50 years.

Examples of PRMs

- Marks that are close to the surface of roads or footpaths or are in the likely building platform of an undeveloped urban lot or a ROW, are unlikely to satisfy these criteria. Marks buried at a safe depth, particularly in a rural environment, are more likely to meet these criteria.
- Historically, some survey marks have been shown with a double circle where they were iron tubes or where, at that time of the survey, the mark was considered more durable than other marks. A new survey will need to re-assess any existing marks to determine whether they meet the criteria specified in rule 7.4.3. This includes an existing order 5 or higher control mark or where a mark was considered a PRM on an underlying survey.

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Number of permanent reference marks

- Every cadastral survey required to have a witness mark must include a minimum of two PRMs [r 7.4.1(a)].
- The requirement for two PRMs applies to a survey of new QEII covenant boundaries in terms of *LINZR65308: Interim ruling on survey requirements for open space covenants.*
- A boundary reinstatement survey is not required to include a PRM [r 7.4.1(b)][54].

PRM distance criteria for primary parcel boundaries

- Each of the two PRMs required by rule 7.4.1(a) must be within 300 m for class A and 500 m for class B of any boundary point that is required to be witnessed [r 7.4.2] (as illustrated by the blue circles).
- In addition to those two PRMs, other substantive marks such as trigs and control marks that meet the longevity criteria of rule 7.4.3(b), but do not fall within the prerequisite distances (as illustrated by Trig A), may be treated as additional PRMs for the purpose of the survey.

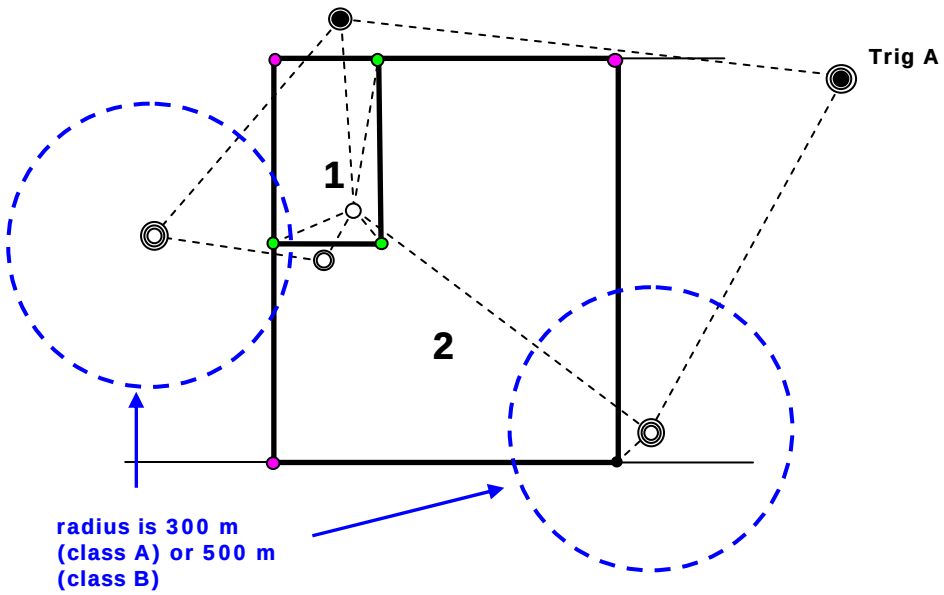

Figure 58: PRMS for class A and class B

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[54] text changed to clarify interpretation of rule 7.4.1(b)

PRM distance criteria for QEII class D parcel boundaries

- Where the class D provisions of *LINZR65308: Interim ruling on survey requirements for open space covenants* are being used, each contiguous portion of land to be covenanted must have a minimum of two PRMs, each within 1000 m of at least one of the new boundary points [alternative requirement (g) of *LINZR65308*: *Interim ruling on survey requirements for open space covenants*].

- In Figure 59: PRMs for QEII covenants below, the contiguous portion of land to be covenanted is over a portion of four underlying primary parcels and is illustrated by covenant areas A – D. As the four parcels are contigious, the boundary points of parcels B and C do not require their own PRMs.

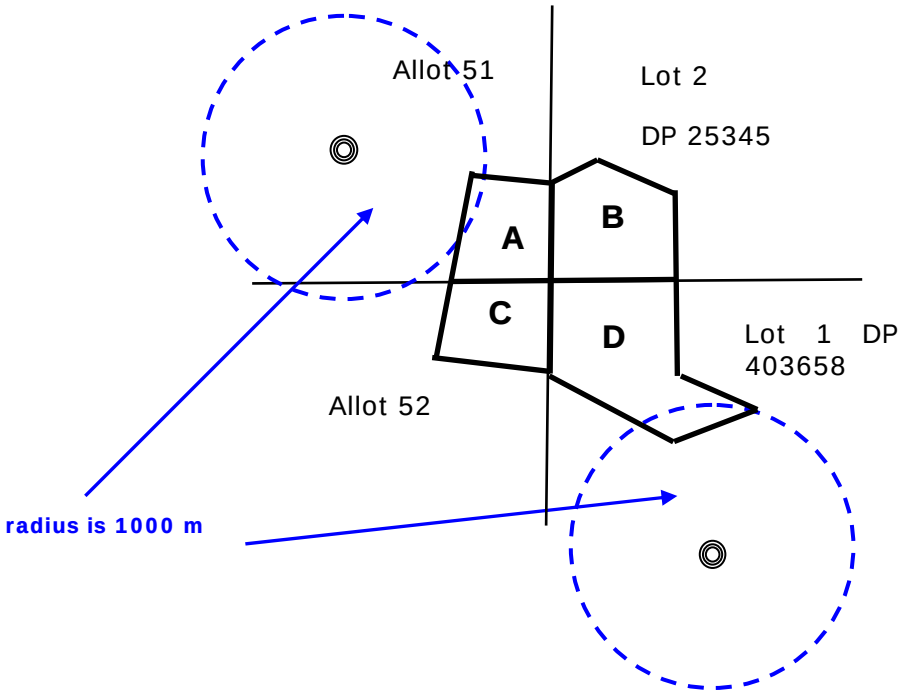

Figure 59: PRMs for QEII covenants

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Permanent reference marks, continued

Line of sight for PRMs	Line of sight between a PRM and any other non-boundary mark or boundary mark is not a requirement of the Rules.
PRM can be a witness mark	A PRM may be used as a witness mark where it is within the distance specified for witness marks [rule 7.4.3(c)].

56. Witness marks

Rules relating to witness marks

7.3 Witnessing of boundary points

Attributes of witness marks

Witness marks are required to have such physical attributes and be placed in such locations that provide a reasonable assurance that they should remain undisturbed and remain useable for at least 10 years [r 7.3.3].

Responsibilities of surveyors regarding witness marks

- The rule only holds the surveyor to account where the mark's loss within 10 years could have been reasonably foreseen at the time it was placed or used in the survey.
- Although existing marks may have been in the ground for a long period of time or appear to be substantive, they must be assessed as to whether they can be expected to survive another 10 years.

Old survey marks need to be reassessed

Historically, some survey marks have been shown with a double circle where they were iron tubes or where, at that time of the survey, the mark was considered more durable than other marks. A new survey will need to re-assess any existing marks to determine whether the mark meets the criteria specified in rule 7.3.3.

Boundary reinstatement surveys and witness marks

A boundary reinstatement survey must include at least one witness mark [r 7.3.2(d)].

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Examples of boundary points to be witnessed

Figure 60 illustrates a primary parcel being subdivided into two new parcels in class B. The eastern and southern boundaries of Lot 1 are new boundaries. The blue circles represent the distance between a boundary point and a witness mark specified by rule 7.3.2.

The requirement to witness boundary marks applies to every:

- boundary point defined by the survey [r 7.3.1(a)]. A green cross indicates an unmarked boundary point defined by survey,
- new boundary mark on the parcel under survey [r 7.3.1(c)] (depicted as green circles), and
- old boundary mark on the parcel under survey [r 7.3.1(c)] (depicted as a black circle).

Note that:

- the existing boundary points shown in purple are defined by adoption and are not required to be witnessed,
- while Trig A can be classified as a witness mark [r 7.3.3] and can count as one of the three (or four) required witness marks [r 7.3.2(c)] it does not count as a mark witnessing a boundary point.

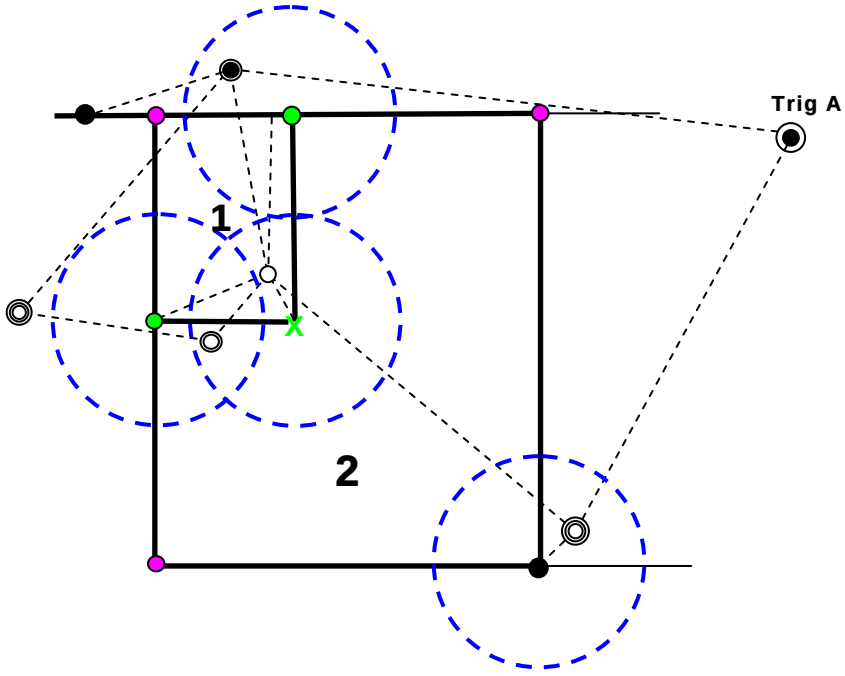

Figure 60: Boundary points required to be witnessed

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Witness marks, continued

Witnessing old marks off parcel	Witnessing is not required for an old boundary mark that has been connected to by the survey, but is not on the boundary of a parcel under survey (as illustrated by the old boundary mark to the north-west of Lot 1 in Figure 60) [r 7.3.1(c)].
Multiple boundary points and witness marks	A witness mark may be used to witness more than one boundary point if it falls within the witnessing distances (as illustrated for the southern boundary points of Lot 1 in Figure 60).
Witness mark can be a PRM	A witness mark can also act as a PRM if it complies with the criteria of rule 7.4.3(b).
Witness marks and adopted and accepted points	Witness marks are not required for boundary points defined by adoption or accepted.
A control mark at boundary point cannot witness itself	An existing control mark (including a trig) on a boundary point, cannot be a witness mark to that particular point [r 7.3.3(b)].

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Witnessing non-primary parcel boundary points

- A new non-primary parcel boundary point must be witnessed when:
  - it is on a lease parcel and the boundary is a right line or arc boundary [r 7.3.1(b)],
  - the non-primary boundary point has been marked [r 7.3.1(c)], or
  - it is a stratum boundary point.
- A non-primary parcel boundary point does not have to be treated as a new primary parcel point when it coincides with a primary parcel boundary (refer to Non-primary parcel boundary intersections above). This coinciding position is only required to be witnessed in the circumstances set out in the preceding paragraph.
- If a boundary point or mark has been witnessed, a survey must include a minimum of three witness marks (class A) or four witness marks (class B) [r 7.3.2(c)]. It must also include permanent reference marks [r 7.4.1].

  An example where this applies is in the case of a unit development where a unit has a new stratum boundary.

Witnessing water boundaries

- Where there is a new water boundary on a primary parcel, only the end points of that water boundary must be witnessed [r 7.3.1].

  The positions along the water boundary fixed as part of the field survey to determine the boundary's shape and location are not boundary points for the purpose of the Rules and are not required to be witnessed.
- There are no witnessing requirements for existing water boundaries that are defined by adoption or accepted.

Line of sight for witness marks

Line of sight between a witness mark and other non-boundary marks or boundary points is not a requirement of the Rules.

Boundary marking

57. Overview

Introduction to the requirements relating to boundary marking

Because landowners are entitled to rely on boundary marks as being the definitive markers of their estate, it is essential that:

- they are placed whenever the boundary is potentially in dispute, and
- when they are placed, they are recognisable.

This section explains the rules that specify:

- the circumstances where boundaries must be marked, and
- the attributes of boundary marks.

Link to boundary marking and types of boundary marking requirements in the guide

This section contains the following topics:

58. Boundaries to be marked

Rules relating to boundary marking

7.1 Boundaries to be marked

7.2 New boundary marks

Meaning of the term 'practicable'

Practicable [r 7.1] applies to the circumstance where it is reasonably possible in practice to achieve the requirement. This generally includes circumstances where ground marking is difficult or inconvenient.

When requirement to mark boundaries applies

- The requirement to mark boundary points applies only to primary parcels.
- Ground marking of boundary points associated with non-primary parcels, including rights of way, is not required by the Rules.

Boundary marking when land is Crown land or Māori land

- Where a boundary point is common to new parcels that are all intended to remain in Crown ownership, or the point is on a survey under the jurisdiction of the Māori Land Court, then the point is not required to be ground marked [r 7.1(a)(i) and (ii)]

  Note that these boundary points are required to be witnessed [r 7.3.1] and the survey must include PRMs [r 7.4.1].
- The Crown agency commissioning the survey, or the Māori Land Court might specify ground marking where they consider it appropriate.

Boundary marking when boundary is in common ownership

- A boundary point is not required to be marked where the point is common to parcels that are required to be, or as a result of the survey will be required to be, held in common ownership [r 7.1(a)(iii)]. An example of this is when the parcels are subject to a compulsory amalgamation condition under the RMA 1991.
- However, this exemption does not apply to those cases where two adjoining parcels will be held in common ownership without any legal requirement to be held together. In this case, the points are to be marked.

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Boundary marking when position is not required to be located

- A boundary point is not required to be marked where the point is unlikely to be needed to be physically located in the foreseeable future because of the terrain, ground cover, or protected vegetation [r 7.1(a)(v)].
- Examples include boundary points coinciding with a cliff face or within current or intended bush covenants.

Boundary marking segregation strips

- Where an existing primary parcel is being subdivided and a new segregation strip created to adjoin an existing road, the common boundary of the segregation strip with the road:
  - must be defined by survey in the case of a parcel in class A less than 0.4 ha [r 6.2], or
  - may be defined by adoption in other cases [r 6.4]. Note, the criteria for accepting a boundary will never be able to be met in these circumstances.

  Irrespective of class, these boundary points are not required to be marked [r 7.1(a)(iii)].
- Where a new road and segregation strip are being created at the same time, the new common boundary of the segregation strip with the road must be defined by survey [r 6.2(a)(ii)], but it is not required to be marked [r 7.1(a)(iii)].

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Marking boundaries when occupation is at boundary point

A boundary point is not required to be marked where the point is readily identifiable by occupation along the boundary [r 7.1(a)(vi)]. Note that where the offset of a fence or post exceeds the accuracy standard, the new boundary point must be marked.

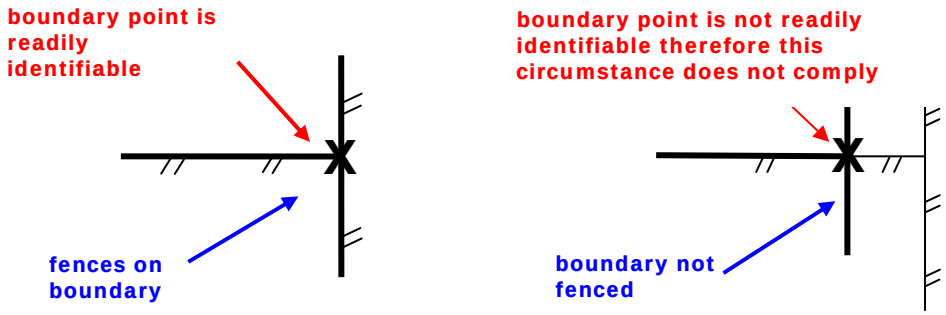

Figure 61: Occupation in regard to a boundary point

Note: Although the above diagram depicts 'fence symbology', the Rules do not include specific symbols for depicting fences, but rule 9.5(a) does require that the feature be described.

Marking boundaries where there is conflict

A boundary or boundary point that is required to be defined by survey because there is conflict [r 6.2(a)(vi)] must be marked where practicable unless there is already a reliable boundary mark in place [r 7.1(b)].

Marked boundaries to be defined and witnessed

- In those cases where a boundary mark is placed, the mark is to be:
  - defined by survey [r 6.2(a)(ii) and (v)], and
  - witnessed [r 7.3.1(c)].
- The survey report must record when rule 7.1 is used as an exemption from marking [r 8.2(a)(xiii) and (xiv)].

59. New boundary marks

Rules relating to new boundary marks	7.2 New boundary marks
Boundary mark types	Boundary marks must be a traditional wooden peg, a post, or another type of peg (eg aluminum or plastic). Where another type of peg is used, it is required to be labelled as a boundary mark. If the use of any of those is not practical, then any other type of mark can be used, which must be labelled as a boundary mark.
Iron spike as a boundary mark[55]	An iron spike would probably not comply unless it was clearly labelled as a boundary mark.
Lead plug as a boundary mark	A lead plug in concrete would probably not comply unless it was clearly labelled as a boundary mark.
Dumpy peg as a boundary mark	A dumpy peg would generally fall into the criteria specified in rule 7.2(a)(iii) and therefore would be considered a boundary mark that must be clearly labelled.
Wooden stake as a boundary mark	A wooden stake would not generally fall into the criteria specified in rule 7.2(a)(iii) and therefore would not be considered a boundary mark.
Engraving boundary marks	Lot numbers, the 'R', and the broad arrow are not required on boundary markers, although surveyors may continue to show them if they wish.

continued on next page

[55] text changed to clarify interpretation of rule 7.2(a)

Extraneous boundary marks

- Where a new parcel is being created, additional boundary marks may be placed along existing and new parcel boundaries. These marks must be witnessed [r 7.3.1].

  In the future, new boundaries may be calculated between these marks noting:

  - in some cases, the boundary points must be defined by survey [r 6.2(a)] and therefore witnessed on that later survey [r 7.3.1].
  - for all other cases, the points may be defined by adoption providing the relevant accuracy standards are met.

- Where additional marks are not placed on boundaries, they must be treated as non-boundary marks in a CSD and meet the accuracy tolerances for non-boundary marks [r 3.1].

  In the future, when these marks are used as boundary marks:

  - they must be defined by survey as they are new boundary points on that later survey [r 6.2(a)(ii)] and
  - the mark labelling, witnessing, and PRM requirements apply [r 7.2, r 7.3.1(c) and r 7.4.1(a)].

Dealing with old marks and existing positions

60. Overview

Introduction to the requirements relating to old marks

It is essential that the primary evidence of boundary location (ie old marks) is dealt with in a consistent and appropriate manner. This not only ensures that boundaries are correctly relocated, but that future users are able to evaluate the evidential value of this information.

This section explains the rules that relate to old marks and existing positions that are marked.

Links to requirements relating to old marks, OP No record, disturbed, renewed and reinstated marks

This section contains the following topics:

61. Old boundary mark

'Old' means 'already in cadastre'

The definitions for **old survey mark** and **old boundary mark** mean that a mark is permitted to be recorded as 'old' only where its presence is already recorded in the cadastre (normally where the mark has already been recorded on an approved CSD).

62. Old mark no record

'Old' means 'already in cadastre'

- The definitions for **old survey mark** and **old boundary mark** mean that where a mark is found but its presence is not already recorded on a CSD (ie the mark is unofficial), then this mark must be considered as new to the cadastre (irrespective of the physical age of the mark).

- In the cadastre there are CSDs that have been **approved as to survey** or **approved for records purposes only**. In both cases, these CSD may have recorded **OP No record** or other similar marks. These marks are official for the purposes of future surveys but their evidential value would need to be carefully assessed and their positions proven. If used in a later survey they must be referred to as an old mark with the prior CSD reference.

Treatment of unofficial marks[56]

- Where an **unrecorded boundary mark** is included in a CSD and has evidential value, it must be considered as new to the cadastre. This can be achieved by treating:

  - the mark as a **new** boundary mark. In this circumstance, the surveyor is taking responsibility for the correctness of its position as a new boundary marker [r 6.2(v)], or

  - by treating the mark as evidence for the purposes of definition in a similar manner to a fence post (occupation). In this circumstance, the surveyor is required to provide details about the mark [r 9.5(a)(iv)].

- Where an **unrecorded boundary mark** is included in a CSD but it has been determined as being incorrectly placed and is ignored for the purpose of definition, the peg may be shown as an occupational feature [r 9.5(a)(iv)]. In this case, the survey report must outline why the mark is not part of the survey evidence [r 8.2(a)(ix)].

- An unrecorded non-boundary mark must be treated as a new mark. This includes traverse marks placed by a survey not yet approved by LINZ.

continued on next page

[56] text changed to clarify interpretation of rule r 6.2 & 9.5(a)(iv)

Old mark no record, continued

Marks from monumentation CSDs are authoritative

A monumentation CSD is an authoritative CSD source. Surveys that use a mark originally recorded on a monumentation CSD must treat it as an **old** survey mark [r 2].

63. Disturbed mark to be treated as new

Rules relating to a disturbed mark

7.6 Disturbed mark to be treated as new

Disturbed mark to be treated as a new mark

A disturbed mark is a mark that is not in its original position, and therefore it must be treated as a new mark in its new position [r 7.6].

Use of term 'disturbed' for an existing mark'

The use of the term **disturbed** is a clear indicator that the primary evidence (ie the old mark) has been found but that the surveyor has determined that it is not in the position it was originally placed. This allows future users to evaluate the evidential value of this information.

Use of term 'unreliable' for an existing mark'

Historically, old marks (particularly old traverse marks) that appeared to be physically **undisturbed,** but when compared with other old marks via adopted vectors did not fit within mathematical tolerances, were in some cases termed **unreliable**. The meaning of this term is not clear and its use is therefore not appropriate. The surveyor is required to determine if a mark is in its original position or not. The fact that measurements indicate a mathematical disagreement with other marks does not necessarily determine the mark as being out of position.

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64. Renewed mark

Use of term 'renewed' for an existing position

The term 'renewed mark' applies to a mark placed in the same position as an old mark that has been physically located. This applies to both boundary and non-boundary marks. If an old mark is not found, a new mark cannot be considered to be renewing it.

Use of terms 'in the position of' and 'replaced' for existing positions

'In the position of' or 'replaced' instead of 'renewed' are not appropriate terms as they are not clear as to whether an old mark had been found prior to the placement of a new mark. Using 'renewed' is a clear indicator that the primary evidence of a position was found (ie the old mark) before it was replaced with a new mark.

65. Reinstated mark

Use of term 'reinstated' for an existing position

'Reinstated' applies to a mark placed in the same documentary position as an unfound mark placed by a prior survey. This applies to both non-boundary and boundary marks.

Using the term 'in the position of' or 'replaced' for an existing position

'In the position of' or 'replaced' instead of 'reinstated' are not appropriate terms as they are not clear as to whether an old mark had been found prior to the placement of a new mark. Using 'reinstated' is a clear indicator that the primary evidence of a position (ie the old mark) was not found and a new mark has been placed on that boundary point. This allows future users to clearly evaluate the evidential value of this information.

Mark names

66. Overview

Introduction to the requirements to name survey marks

The cadastre is being continually updated by the integration of new cadastral survey datasets and the introduction of more and more survey marks. It is essential that survey marks that relate to particular points are able to be identified and not confused with other marks.

This section explains the rules that specify the naming of marks.

Links to namimg non-boundary marks in the guide

This section contains the following topics:

67. Survey mark names

Rules for non-boundary mark names

7.5 Unique survey mark name

Non-boundary marks to be given a names

- All new **non-boundary** survey marks and points must be given unique names [r 7.5(a)]. These include new PRMs, new witness marks, and other new non-boundary marks (including traverse marks or unmarked points included in the CSD).
- New boundary points and boundary marks are not required to be given unique names although surveyors may do so for referencing purposes.

Components of non-boundary mark name

The name must be described by the use of three components in the following sequence [r 7.5(b)].

Sequence	Example
1. Physical mark type which may be abbreviated	IT
2. Unique alpha-numeric identifier	1
3. Type and number of the CSD	DP 405689

continued on next page

Survey mark names, continued

Changing the name of an existing non-boundary mark name[57]

- Rule 7.5(a) requiring a unique name for non-boundary marks applies only to new marks.
- If an old mark is not uniquely referenced, a unique reference may be added. The recommended procedure is to show a unique number in brackets to indicate that this reference is not found on the original survey. For example, PRMs from DP 7700 could become PRM(1) DP 7700 and PRM(2) DP 7700.
- If additional information is to be added to a mark for the benefit of future users (eg a geodetic code), it must be clear that this information is not part of the mark name. One way of ensuring this is to add the information under the mark name in brackets.

Name of undisturbed old non-boundary mark

An undisturbed old non-boundary mark must retain its existing name [r 7.5(c)] including the physical mark type, unique identifier (if it has one), and the CSD source type and number.

[57] text changed to clarify interpretation of rule r 7.5(a)

Compliance

68. Overview

Introduction to the requirements relating to certification of a CSD

Section 47 of the Cadastral Survey Act 2002 outlines the general duties in relation to cadastral surveys. These relate to the duties of a licensed cadastral surveyor in regard to their responsibilities, and where the Surveyor-General may provide for exemptions or alternatives to the Rules.

This section explains:

- the responsibilities and implications of CSD certification, and
- any dispensation to the Rules.

Links to certification and dispensation requirements in the guide

This chapter contains the following sections:

69. Certification

Rules relating to CSD certification

9.1 CSD plan information

10.1 Title Plan information

13 Certification

Materiality of CSD certification

- Rule 13 requires surveyors to certify as to accuracy and correctness of a CSD and its compliance with the Rules. The certification applies to all rules irrespective of whether the surveyor considers a particular rule is material to the survey or not.
- In completing the certification, the surveyor is stating the dataset and its related survey were undertaken by the certifier (licensed cadastral surveyor) personally, or under their personal direction (refer to schedule 2 Cadastral Survey Act 2002 and Surveys directed by other surveyors below).
- The certification applies to all the data contained within the CSD.
- The certification is also specifically required to appear in the CSD plan [r 9.1(c)].
- Irrespective of the tools used by the licensed cadastral surveyor to create a CSD (including tools provided by LINZ which predetermine the form of some of the data components), the data in the CSD as submitted and certified, will remain unchanged as submitted to LINZ. This means the responsibility for the correctness and accuracy of the CSD rests on the licensed cadastral surveyor.

Title Plan certification information

The name of the certifying surveyor and the survey firm is required to be part of the Title Plan [r 10.1(b)].

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Where boundaries are defined by survey

The certification includes compliance with rule 6.1 which requires a surveyor when defining a boundary by survey, to gather and interpret evidence in accordance with all relevant enactments and rules of law. This means that in the context of a boundary defined by survey, the surveyor is certifying that they have properly considered:

- the Cadastral Survey Act 2002 and other legislative requirements particular to that survey and include statutory regulations, rules and rulings. Examples include the Conservation Act 1987, LTA, Te Ture Whenua Māori Act 1993, Surveyor-General's Rulings and so on, and
- other rules of law. This includes relevant common law precedents such as recent legal judgments, the hierarchy of evidence, and the doctrine of accretion and erosion.

Record purposes only CSDs

- There is no provision for a CSD of a lesser standard to be lodged for 'record purposes only'.
- Every CSD must be fully compliant with all applicable rules. On acceptance by LINZ, every CSD will contain authoritative data.

No exclusions to certification

The surveyor may wish to include in the CSD, diagrams and information that were prepared for other purposes. Examples include 'as built diagrams' or 'scheme plans'.

If this information is included, it must be correct. Any statements that were designed to limit liability for those other purposes must be removed before inclusion in the dataset. Examples include '*the users of this information must independently verify the information*' or '*this information is subject to survey*'.

70. Surveys directed by other surveyors

Work completed by other surveyors

- Surveyors need to be particularly aware of their obligations when certifying a survey which has been partially completed under the direction of another licensed cadastral surveyor (refer to *Survey Quarterly Issue 56*, December 2008, p30).

- Schedule 2 Cadastral Survey Act 2002 states that a licensed cadastral surveyor is guilty of professional misconduct if the cadastral surveyor is found in any proceedings or appeal under Part 4 –

  (1)(b) to have certified to the accuracy of any cadastral survey or cadastral survey dataset without having personally carried out or directed the cadastral survey and the related field options,

  (1)(c) to have certified to the accuracy of any cadastral survey or cadastral survey dataset without having carried out sufficient checks to ensure the accuracy of the entries in any field book and the accuracy of all calculations, working plans, and other cadastral records that may have been made by any person employed by him or her in relation to the cadastral survey,

  (1)(d) to have certified to the accuracy of any cadastral survey carried out by the cadastral surveyor or under his or her personal direction if the operation of pegging and ground marking, and all other requirements of the cadastral survey, have not been carried out in accordance with standards set under Part 5.

71. Dispensations

Dispensation requirement to act as a rule

When a surveyor has had a dispensation granted by the Surveyor-General (or his delegate) allowing an exemption from a particular requirement or specifying alternative requirements, the dispensation becomes part of the rules for the purpose of the surveyor's certification for that survey [s 47(6) of the Cadastral Survey Act 2002]. The surveyor must either fully comply with the terms of the granted dispensation or with the normal rule(s).

Availability of dispensation

Dispensations are not specifically provided for in the Rules but can be considered under s 47(5) of the Cadastral Survey Act 2002.

Generally dispensation requests will only be granted where:

- there are no significant risks to the cadastral outcomes,
- the circumstances are exceptional, and
- the particular case is not covered by the Rules.

Retention of field information

72. Overview

Introduction to the requirements relating to field information

Field information consists of entries made at the same time as the facts of a survey are ascertained. It is therefore particularly important as evidence of the survey, as recognised in the Cadastral Survey Act 2002 and by the New Zealand Courts.

This chapter explains the rules that relate to the retention of field information.

Links to the requirement to retain field information

This chapter contains the following sections:

Cadastral survey datasets

73. Overview

Introduction to the requirements relating to a CSD

A cadastral survey dataset (CSD) provides an authoritative source of information as to where a boundary is located, where a parcel of land is located, and the attributes of that parcel and boundary. This information enables the correct and unambiguous allocation and management of land rights and the correct re-establishment of the boundaries in the future.

This chapter explains the rules that relate to the structure of a CSD, the information required in different types of CSDs, and CSD certification.

Links to requirements related to structure of a CSD, information in a CSD and CSD types

This chapter contains the following sections:

Structure of a CSD

74. Overview

Introduction to the structure of a CSD

It is essential that users can readily locate and unambiguously interpret the information in a CSD according to their needs.

This section explains the key components of a CSD and how the information must be structured.

Links to the requirements related to the key components of a CSD

This section contains the following topics:

75. Key components

Rules relating to CSD content

8 Cadastral survey datasets

CSD Components for a CSD creating a new parcel

Where a new parcel is being created, the content of a CSD must include three key plan components [r 8.1]:

	Component	Description
1	CSD Plan [r 8.1(a)]	• This component holds survey information and is designed for survey users. • The information provides a record of the survey as lodged and certified, and is necessary to enable the accurate re-establishment of boundaries in the future.
2	Title Plan [r 8.1(b)]	• This component holds title information, and is designed for tenure managers and right holders. • The information is necessary for the correct management and allocation of rights; to support the resource consent process (before and after lodging with LINZ); and to depict the rights for current and future landowners, right-holders and other interested parties.
3	Other specified information [r 8.1(c)-(f) and r 8.2]	This component holds information not required to be part of the CSD Plan or Title Plan, but necessary for the CSD to be integrated into the cadastre and to enable the tenure manager to issue the intended rights.

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How the CSD components fit together for the Rules

The **CSD Plan**, **Title Plan**, and **Other specified information** combine to make up a CSD.

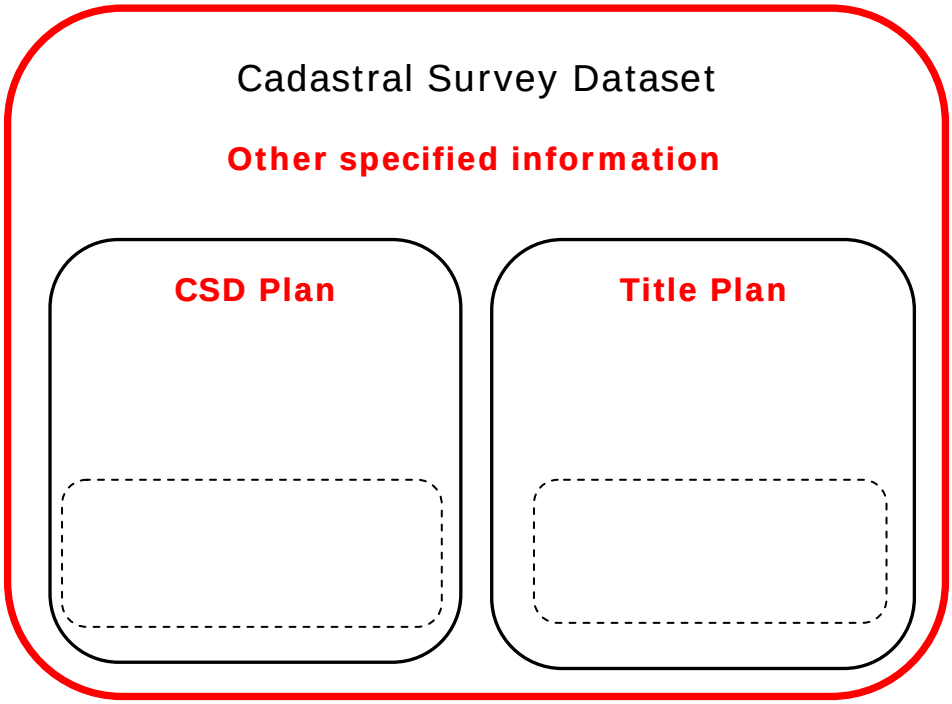

Figure 62: Relationship between CSD components

Title Plan not required where no new parcel

Where a new parcel is not being created (eg a CSD that records only survey information or the placement of a boundary mark), the Title Plan component is not required (refer to Title Plan not required for CSD recording boundary marking below).

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How the CSD components fit together in Landonline[58]

- In Landonline, the **CSD Plan**, **Title Plan**, and **Other information** combine to make up a CSD (refer to Figure 63 below).
- 'Other information' will include the mandatory information specified by rules 8.1(c)-(f) and 8.2 plus non-mandatory information supporting the CSD.
- The CSD Plan will include the mandatory information specified by rule 9. Some of the non-diagrammatic information will be captured as components of the survey header and the mark and vector report. Where the information is attached as a 'Plan grahic' supporting document, Landonline will incorporate it as part of the Diagram of Survey and the Diagram of Parcels.
- The Title Plan will include the mandatory information specified by rule 10.

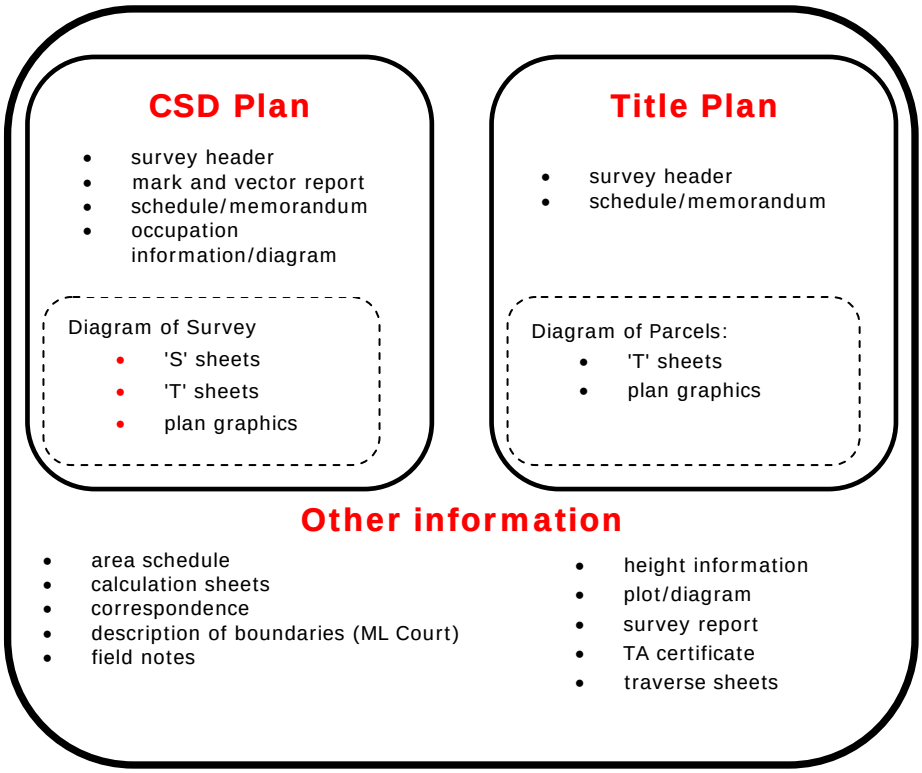

Figure 63: CSD format in Landonline

[58] text changed to clarify application of Rules and Landonline

76. Non-mandatory information

Additional information may be included in CSD

Other non-mandatory information such as traverse sheets, calculation sheets, schedules for legalisation CSD or additional diagrams may be included in the CSD. Where it is included in a CSD, it must be consistent with the other information in the CSD required by the Rules.

CSD Plan

77. Overview

Introduction to the requirements relating to the CSD Plan

The CSD Plan holds survey information designed for survey users. The information is necessary to provide a record of the survey as lodged and certified and to enable surveyors to use this information to re-establish the boundaries in the future.

Links to the requirements relating to CSD Plan components

This section contains the following topics:

78. Components of a CSD Plan

Rules relating to CSD plan

9 CSD Plan

CSD Plan must be always included in a CSD

- Every CSD must include a CSD Plan [r 8.1(a) and r 11.3(a)].
- This includes **CSDs of parcel without survey information** for unit and cross lease developments where the CSD plan and the Title plan may be quite similar. The majority of information will be aspatial information depicted on plan graphics[59].
- Note that **CSDs of parcel without survey information** is a term used in Landonline and in the Cadastral Survey Fees regulations 2003 to identify CSDs without non-boundary marks and related vectors.

CSD Plan components

A CSD Plan consists of both diagrammatic and non-diagrammatic information. The diagrammatic information must be depicted on a Diagram of Survey [r 9.6 and r 11.4.1].

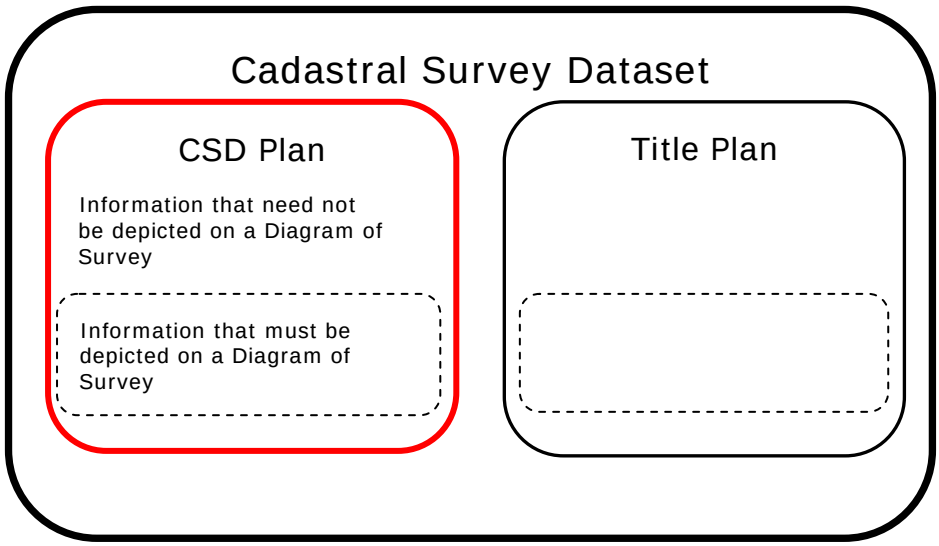

Figure 64: Information in a CSD Plan

[59] text changed to clarify interpretation of rule r 8.1(a) & r 11.3(a)

79. Non-diagrammatic information in a CSD Plan

Non-diagrammatic information in a CSD Plan

In a CSD Plan, information not required to be presented diagrammatically includes information about:

- existing CSDs used for the survey [r 9.1(a)] (note, the land district reference is required for CSDs with a number less than 300 000),
- the location and description of PRMs [r 9.1(b)] (refer to Information for permanent reference marks below),
- horizontal and vertical datums used in the survey [r 9.2] (refer to Datum information below),
- adopted vectors, bearing adjustments, and the type of vectors [r 9.3] (refer to Recording vectors and dimensions below),
- adopted boundaries, the survey class, and the description of a water boundary [r 9.4] (refer to Recording class of survey in CSD plan and CSD diagrams must include physical description below), and
- occupation and physical features [r 9.5] (refer to Occupation and physical features below).

Non-diagrammatic information may be in Diagram of Survey

In a CSD Plan, the surveyor can choose to include non-diagrammatic information on the Diagram of Survey. Its inclusion on the diagram satisfies rules 9.1 to 9.5.

80. Information for permanent reference marks

Rules relating to PRM in CSD plan

9.1 CSD Plan information

Description and location of PRM information in CSD plan[60]

- A CSD Plan must include the description and location information for a PRM where that information is not already recorded in the cadastre [r 9.1(b)]. Historically this information was often recorded in a location diagram.
- While the rule does not specify content, the information could include:
  - the relationship of the mark to physical features and structures in close proximity,
  - the mark's relationship to ground level, and
  - a description of any material used to stabilise the mark (eg concrete).
- It is recommended that this information is captured in the Landonline 'mark detail – description' field.

  This enables the information to be viewed with the object information tool in the spatial window and it also appears in the 'mark and observation' schedule of the CSD plan.

  Alternatively, this information can be provided as user added text on a Diagram of Survey or on a location diagram in conjunction with the 'occupation diagram' that gets incorporated into the 'CSD plan'.
- Descriptions for geodetic control marks included in the geodetic database satisfy rule 9.1(b).

[60] text changed to clarify application of rules in Landonline

81. Occupation and physical features

Rules relating to occupation and physical features

9.5 Information about occupation and physical features

Meaning of extent of occupier's use of land

- A CSD Plan must include occupation information [r 9.5(a)].

  If a field note is used to depict occupation, this note must be included in the CSD as an 'occupation diagram' so that it becomes part of the CSD plan[61].

- The requirement to provide occupation information applies both when the extent of occupation is contained inside the parcel under survey and where the land used extends beyond the parcel boundaries as shown below.

- Historically, occupation has been interpreted as the physical objects in close proximity to a boundary rather than the extent of an occupier's use.

- To satisfy rule 9.5, the information must now include the nature and age of the feature (fence) and its relationship to the parcel boundary.

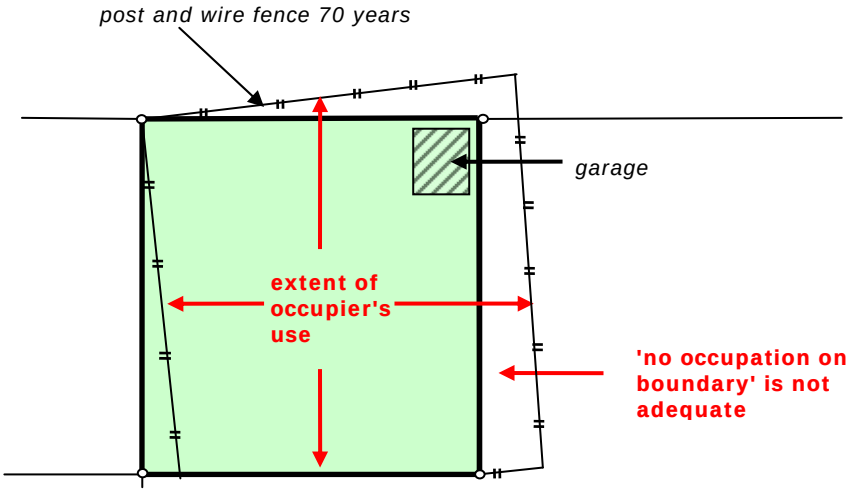

Figure 65: The extent of occupier's use

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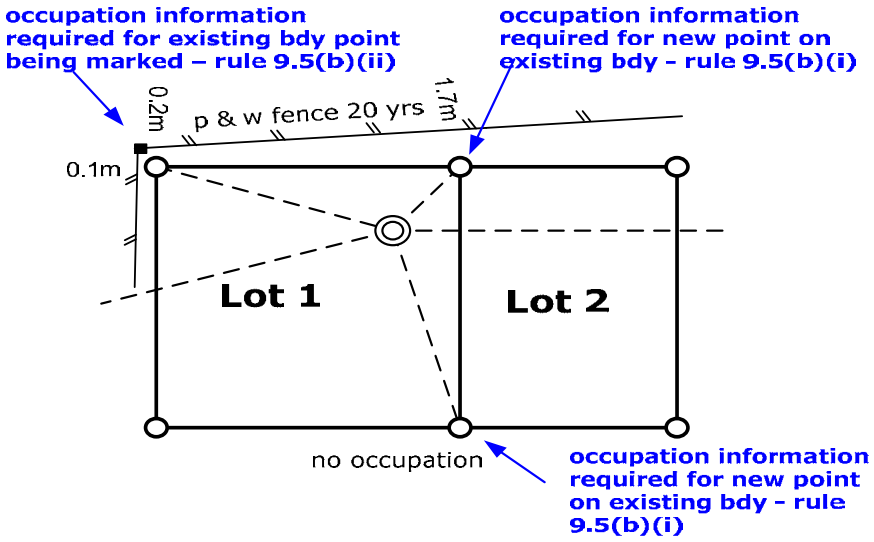
[61] text changed to clarify application of rules in Landonline

When occupation information is required

- The longstanding practice of including occupation information only for new boundaries and in some cases only where occupation was within 1 m of a boundary, no longer applies.
- The requirement to include occupation in a CSD Plan applies to all:
  - new primary parcel boundary points defined by survey on an existing boundary [r 9.5(b)(i)]. Line pegs are an example.
  - existing points being marked or remarked [r 9.5(b)(ii)]. This applies to both primary and non-primary parcels.
  - existing or new boundary points required to be defined by survey because of conflict or when there is the potential for another party to have an interest in the boundary location [r 9.5(b)(iii)].

    Note that in this case the occupation must be in the form of a diagram [r 9.5(b)(iii)] to enable a layperson to easily interpret the relationship between the occupation and the boundary.
- Relevant occupation can be inside or outside the parcel under survey[62].



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[62] text changed to clarify interpretation of rule r 9.5

OP no record can be occupation

- If an old peg is not used as a boundary mark on the new survey, it must be recorded in the CSD Plan as occupation information [r 9.5(a)(iv)] (refer to Old mark no record). While the details to be provided are not specified, the information could refer to the mark being unofficial and having the appearance of a boundary mark.

- The information required by rule 9.5(a)(iv) and mark position may be depicted on the Diagram of Survey as an alternative method of complying with this rule.

Title Plan

82. Overview

Introduction to the requirements relating to the Title Plan

A Title Plan holds title information and is designed for tenure managers (examples are the Registrar-General of Land and the Māori Land Court), right holders, and other users (including lawyers and local authorities).

The information is necessary for the correct management and allocation of rights, to support the resource consent process (before and after lodging with LINZ), and to depict the extent and location of rights for current and future landowners, right-holders, and other interested parties.

Links to the requirements relating to Title Plan components

This section contains the following topics:

83. Components of a Title Plan

Rules relating to Title Plan

10 Title Plan

Title Plan components

A Title Plan consists of both diagrammatic and non-diagrammatic information. The diagrammatic information must be depicted on a Diagram of Parcels [r 10.4].

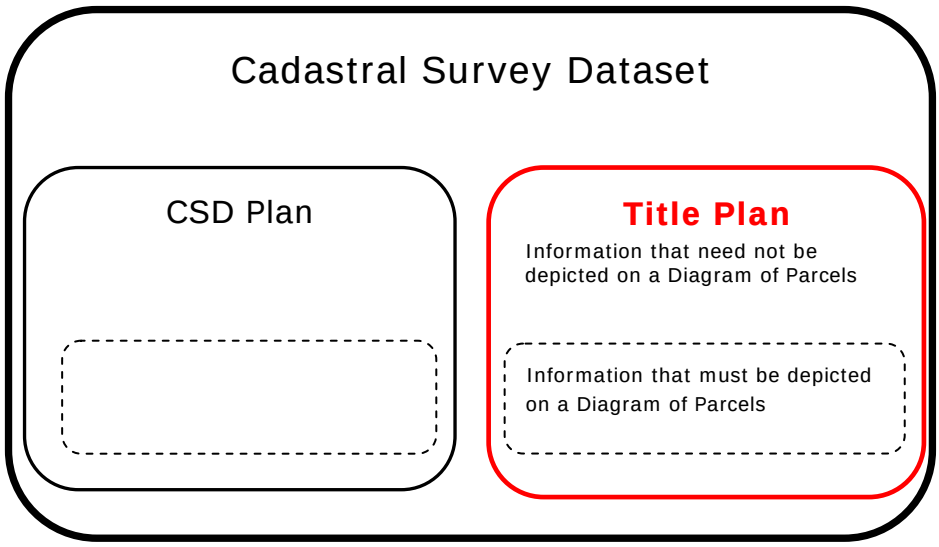

Figure 66: Information in a Title Plan

When a Title Plan is required

A CSD must include a Title Plan whenever a new parcel is being created [r 8.1(b)].

84. Non-diagrammatic information in a Title Plan

Non-diagrammatic information required in Title plan

Information which is not required to be presented diagrammatically on the Diagram of Parcels includes:

- information that enables a tenure manager to process the CSD [r 10.1],
- easement information relating to either a memorandum or schedule [r 10.2], and
- notations required to support new or existing covenants [r 10.3].

Non-diagrammatic information may be in Diagram of Parcels

In a Title Plan, the surveyor can choose to include non-diagrammatic information on the Diagram of Parcels. Its inclusion on the diagram satisfies rules 10.1 – 10.3.

Parcel intent in Title Plan

A Title Plan must include the parcel intent for each parcel [r 10.1(e)].

Appellation of underlying parcel in Title Plan

- A Title Plan must include the appellation of each underlying parcel [r 10.1(f)], that is the parcels whose interests are or will be directly affected or encumbered by a non-primary parcel (refer to Underlying parcel).
- The underlying parcel must not be confused with the parcel to be extinguished.

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Non-diagrammatic information in a Title Plan, continued

Notations and memorials in Title Plan[63]

- In a Title Plan, the notations, memorials, or other matters required by law [r 10.1(g)] will be determined by the legislation applicable to the survey. Examples of where notations may be required are for land being vested, dedicated, transferred, proclaimed, or amalgamated.

- In the case of land that is to vest in the Crown or territorial authority upon deposit of a subdivision CSD, a vesting notation must be shown on the Diagram of Parcels (of the Title Plan). This notation must include the vesting purpose, the fact that the land is to vest, and in whom the land is to vest [RGL requirement for CSD to deposit].

- In the case of land that is in the coastal marine area, the notation 'Common marine and coastal area' or, where applicable, 'erosion (common marine and coastal area)' must be depicted on the Diagram of Parcels of the Title Plan [RGL requirement for CSD to deposit].

  This includes land in a primary parcel where it must become common marine and coastal area upon deposit of a subdivision CSD pursuant to s 237A RMA 1991) (refer to Where common marine and coastal area under s 237A of the RMA Act 1991 below) or land in a residue parcel where it is already common marine and coastal area (refer to Residue parcels and common marine and coastal area above).

[63] text to clarify RGL requirement

Other specified information

85. Overview

Introduction to the requirements relating to other specified information in a CSD

The rules require CSD information additional to that required in either the CSD Plan or the Title Plan. The additional information is required to:

- allow the CSD to be integrated into the cadastre,
- enable the tenure manager to issue the intended rights, and
- ensure future users of the CSD (including future surveyors) understand the evidence and the rationale used by the certifying surveyor when certifying the CSD.

Links to requirements relating to other specified information, datum information and survey report in a CSD

This section contains the following topics:

86. Information required in a CSD

Rules relating to extra information in CSD

8.1 Content of a CSD

8.2 Survey report

Summary of extra information required in CSD

The other specified information includes:

- the appellation of each parcel that is to be extinguished [r 8.1(c)] (refer to Extinguished parcel),
- vertical datum information [r 8.1(f)] (refer to Datum information),
- vectors to ascertain and verify the relationship between points and marks [r 8.1(d) and 8.1(e)] (refer to Recording vectors and dimensions), and
- a survey report [r 8.2] (refer to Survey report).

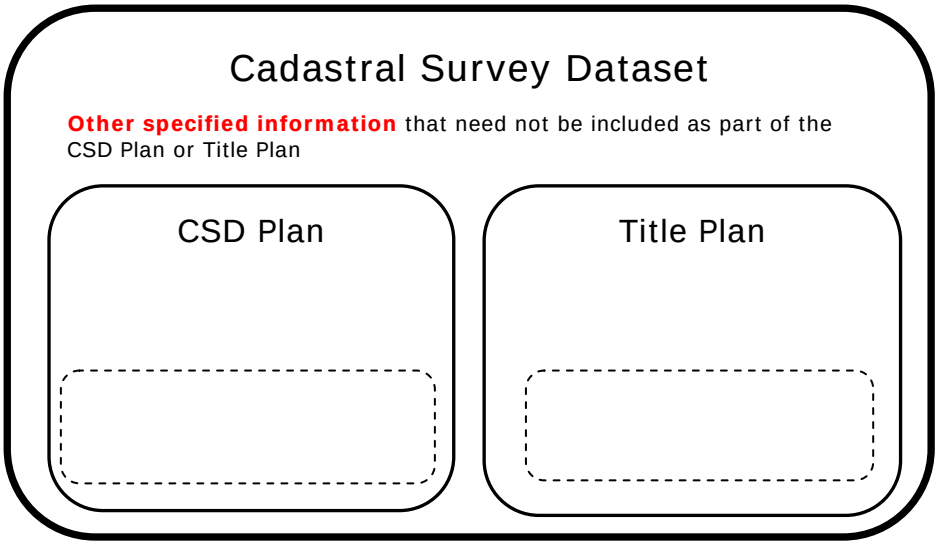

Figure 67: Other information in a CSD

87. Datum information

Rules relating to datum information	8.1 Content of a CSD 9.2 Datum information
Horizontal datum - CSD Plan information	A CSD Plan must identify the horizontal datum and projection used [r 9.2(a)].
No requirement for horizontal coordinates	No reference is required in a CSD to coordinate values or an origin of horizontal coordinates.
Vertical datum - CSD Plan information	Where a reduced level is used to mathematically describe a stratum boundary, the CSD Plan must include the vertical datum [r 9.2(b)].
Vertical datum information where reduced level is used	Where a reduced level is used, the CSD must include information on the origin of the heights [r 8.1(f)].

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Vertical datum where stratum unit boundary has been adopted[64]

Where an existing stratum boundary is being adopted in terms of *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward,* the Diagram of Survey must include the:

- height datum
- heighted non-boundary marks with their reduced levels (they may have been noted as bench marks)
- reduced levels of the stratum boundary.

[64] text changed to clarify interpretation of *Ruling enabling units defined prior to 2010 Rules to be carried forward*

88. Survey report

Rules relating to a survey report

8.2 Survey report

CSD must include survey report

A CSD must include a survey report [r 8.2(a)] unless the CSD is a monumentation CSD (refer to Additional rule exemptions for monumentation CSD below).

Survey report must address all information requirements

Rule 8.2(b) requires that the report must address each of the requirements of rule 8.2(a) by:

- providing the information in the survey report, or
- noting in the survey report where this information is otherwise provided in the CSD, or
- noting in the survey report that the specified requirement is not applicable to the dataset.

Survey report must include purpose of survey

While rule 8.2(a)(i) is not specific, the purpose of the survey could include:

- the general purpose. Examples include the exchange of freehold land for reserve, the uplifting of limitations, claim for accretion;
- the legislation which will be used to complete the intended action. Examples include the LTA, Unit Titles Act 2010, Public Works Act 1981, Local Government Act 1974 or Te Ture Whenua Māori Act 1993. This information is relevant where the process being used is unusual, as in the cases of deed of settlement claims, treaty settlement legislation, or special Acts of Parliament;
- related issues that clarify the process to be used. Examples include the treatment of non-primary parcels, limited titles, staged unit developments, substituted developments, water bed not in a new title, vestings, and claims.

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Survey report must include basis for determining the orientation of bearings

The basis for determining the orientation of bearings [r 8.2(a)(ii)] is an important element of the survey report because the Rules do not specifically require the identification of origin marks.

The information could include:

- a description of the method used to orientate the survey in terms of the official geodetic projection. Examples include:
  - GNSS orientation on two marks, or
  - bearing observations from control marks (refer to Vectors to distant control marks below), or
  - by a traditional three mark origin from existing marks in association with confirmation that the orientation is in terms of NZGD2000,
- an analysis of the reasons why bearings in terms of NZGD1949 and NZGD2000 have been determined as being one and the same, and
- details where the survey does not include field measurements as in the case of new non-primary parcels or where all the boundaries have been adopted or accepted.

Survey report must include information on old marks[65]

The survey report must include:

- an assessement of the adequacy of the number and location of old survey marks used to define boundaries [r 8.2(a)(viii)],
- the reasons why relevant marks were not searched for [r 8.2(a)(vii)], and
- the reasons why an old mark was not relied on [r 8.2(a)(vi)].

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[65] text changed to clarify interpretation of rule r 8.2(a)

Survey report must include reference to prior correspondence with LINZ

The survey report must include reference to any prior correspondence with LINZ on issues relevant to the application of the Rules [r 8.2(a)(xv)]. Examples include reference to a survey dispensation, correspondence with the Registrar-General of Land, or to any other advice provided by LINZ.

Specific CSD types

89. Overview

Introduction to CSD plan types

Although much of the information required by the Rules to be included in a CSD is similar to the information required by past rules or regulations, there are some changes which may potentially cause confusion.

One area of change is with CSD types. This section explains the differences between some historical CSD types and CSD types required under the 2010 rules.

Links to information on historical and current CSD types

This section contains the following topics:

90. CSDs compiled from adopted information

Rules relating to CSDs with only adopted data

6.3 Acceptance of a boundary

6.4 Boundaries defined by adoption

8.4 Adopted information to match source

9.3 Vector information

12.3 Line styles

Historic application of compiled plan does not apply

- Historically, a compiled plan was defined as a plan prepared from existing survey records. It was a CSD prepared without any field survey.
- This dataset type was used for all classes of survey where the boundaries of a new parcel were adopted boundaries that already existed in the cadastre, or were calculated from existing points in the cadastre.
- The 2010 Rules do not use the term **compiled plan**.

Current CSD type where data is adopted

- Rules 6.3 and 6.4 specify when a boundary and boundary points are permitted to be defined by adoption or accepted.
- In some cases, all parcel boundaries in a CSD will fit the criteria of rules 6.3 and 6.4 and be permitted to be adopted from existing survey records. In these cases the CSD will be a **CSD of parcels without survey information** (refer to Parcels without survey information below).
- The Rules require that adopted information is identified as adopted [r 12.3], copied correctly [r 8.4], and that the source of the information is included [r 9.3]. Note that rule 8.4 enables an adoption to include a bearing adjustment[66].
- The Rules do not require the notation **Compiled Plan** to be on the diagrams or included in the CSD.

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[66] text changed to clarify interpretation of rule r 8.4

CSDs compiled from adopted information, continued

Parcels without survey information[67]

- 'Parcels without survey information' is a CSD type used in Landonline.
- It is a CSD where the captured marks and vectors only include boundary points and vectors between boundary points. It does not include captured non-boundary marks and associated vectors. An example where this can occur is an easement only CSD where the boundaries are computed or a mixture of computed and adopted boundaries.
- Where a new boundary is calculated between two existing points, there must be sufficient vectors in the CSD to enable the relationship between the points to be ascertained and verified [r 8.1(d)].
- Where these points have not been in the past linked together by a vector, verifying that the calculated relationship between the two points is within the accuracy tolerances can be problematic. Often the most appropriate proof of this relationship will be by the use of traverse adoptions which must be captured. In this case, while the boundary is a calculated boundary, the CSD will be 'survey' not 'Parcels without survey information'.

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[67] text changed to clarify application of Landonline

Calculating a new boundary between existing boundary points

- Where a new **primary** parcel boundary is to be calculated between existing primary parcel boundary points:
  - If the boundary is class A and the new parcel is less than 0.4 ha, the existing boundary points must be defined by survey [r 6.2(a)(iv)] and witnessed [r 7.3.1(a)]. The survey must include field work because witness marks must not be adopted [r 7.3.3(a)] and PRMs are required [r 7.4.1(a)].
  - For other parcels, the existing boundary points may be defined by adoption providing the points meet the accuracies specified in rule 3.3 The CSD must include sufficient vectors to ascertain and verify the relationship between the boundary points in accordance with the applicable accuracy standard [r 8.1(d)(ii)]. The use of adopted boundary vectors and, in some cases non-boundary vectors, linking these points may serve this purpose. The survey will be able to be completed without field work.
- Where a new **non-primary** parcel boundary is to be calculated between existing parcel boundary points, the existing boundary points may be defined by adoption providing the points meet the accuracies specified in rule 3.3. The CSD must include sufficient vectors to ascertain and verify the relationship between the boundary points in accordance with the applicable accuracy standard [r 8.1(d)(ii)]. The use of adopted boundary vectors and, in some cases non-boundary vectors, linking these points may serve this purpose.

In all cases, the CSD will include a CSD Plan and a Title Plan.

(see Figure 68: A new boundary between existing primary parcel boundary points below)

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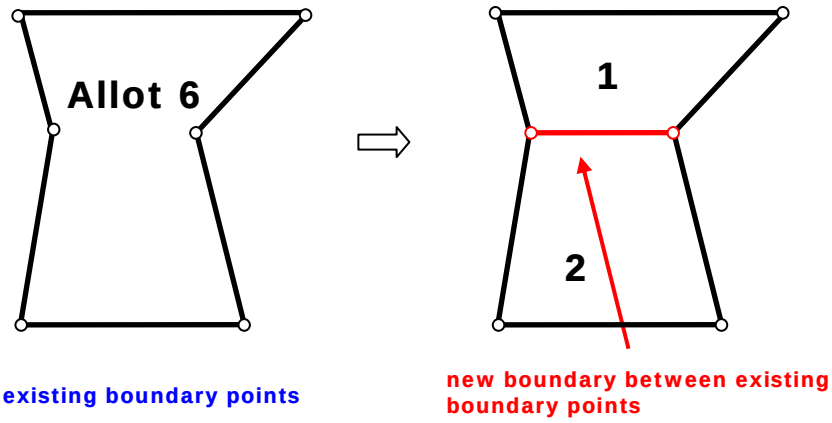

Figure 68: A new boundary between existing primary parcel boundary points

91. CSDs with a computed boundary point

Rules relating to computed boundary point

7.1 Boundaries to be marked

12.2 Survey mark symbols

Historic application of computed plan does not apply

- Historically, a computed plan was defined as a plan prepared either under the proviso in s 167(1) of the LTA or any similar dispensation granted by the Surveyor-General. It was a CSD prepared where a new boundary point was computed without any field survey.
- The dataset type was used for all classes of survey where one or more of the boundaries and boundary points of a new parcel were calculated without any boundary marking on the ground.
- The 2010 Rules do not use the term **computed plan**.

Current application where boundary point is computed

- Rule 7.1 specifies the conditions where a primary parcel boundary point must be marked. Where a new primary parcel boundary point is not required to be marked, it must still be defined by survey [r 6.2(a)(iv)] and witnessed [r 7.3.1(a)].
- Where a CSD only contains non-primary parcels, no new parcel boundary points are required to be marked, witnessed, or to have PRMs [r 7.3.1, r 7.4.1(a).

  Note, there is an exception with some types of non-primary lease boundary points where boundary points must be witnessed [r 73.1(b)] and new stratum boundary points where there must be heighted PRMs and witness marks [r 7(3)(1)(d) and r 7(4)(3)(d)].
- The Rules do not require the notation **Computed CSD** on the diagrams or included in the CSD.

CSDs to record boundary marking

92. Overview[68]

Introduction to CSDs recording boundary marking

The Rules provide for CSDs that record the marking of boundary points. The type of CSD depends on the complexity of the survey.

This section explains the rules that relate to these CSDs.

Links to information on CSDs recording boundary marking

This section contains the following topics:

[68] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

93. Background requirements[69]

Rules relating to boundary marking CSDs

8.5 CSD to be lodged for boundary marking

9 CSD Plan

11 Monumentation CSD

LINZR65309: Ruling allowing a survey that places a boundary mark on an existing line to be a boundary reinstatement survey

LINZR65314: Ruling to enable more boundary reinstatement surveys to be recorded on monumentation CSDs

Obligation to lodge a CSD recording boundary marking

A CSD recording the placement of a boundary mark must be lodged when a boundary mark has been placed to define an existing boundary position and the survey does not create a new parcel (for example, is not a subdivision survey) [r 8.5(a)].

Lodgement within six months for boundary marking CSD

- A CSD recording the placement of a boundary mark must be lodged within six months of the placement of a boundary mark [r 8.5(a)].
- When a boundary position has been repeatedly re-marked (for example, due to ongoing site works removing the mark), a CSD must be lodged within six months of the first time the position was marked. The data on this CSD must record the survey of the last placement of a mark in that position [r 8.5(b)].

Where a stake has been used to indicate a boundary position

- If something other than a boundary mark as defined by r 7.2 has been used to set out an existing boundary point (for example, a stake or painted cross), it is not necessary to lodge a CSD to record the survey.
- Note that if a dumpy peg is placed with a stake, then the dumpy peg is considered to fall within the criteria of a boundary mark [r 7.2(a)(iii)].

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[69] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

Boundary marking CSD to be lodged as SO

A CSD recording a boundary marking survey is to be lodged as a survey office (SO) CSD with a unique CSD reference number.

Boundary marking where title is limited, interim or on diagram on transfer

- For boundary marking surveys where the title is limited refer to Boundary marking surveys and limited titles above.
- For boundary marking surveys where the title is based on a diagram on transfer refer to Boundary marking surveys and boundaries depicted on diagram on transfer above.
- For boundary marking surveys where the title is an interim title refer to Boundary marking surveys and interim titles above.

Boundary marking surveys and Māori land provisional titles[70]

- Where a boundary marking survey is to be carried out and the boundary point is defined on a CSD previously approved under *LINZS10000: Interim standard for computed cadastral survey datasets for Māori freehold land*, the point being marked must be defined by survey [r 6.2(a)(v)]. This means that all the relevant evidence (including evidence relating to Māori Land Court minutes) must be gathered and considered.
- If, after taking into account the evidence, the position of the point does not agree with that defined in the previously approved CSD, a boundary marking survey must not be carried out.
- If a new boundary point is to be recognised as authoritative, a Māori land survey creating new title is required.

[70] text changed to clarify interpretation of rule 6.2(a)(v) and application of Land Transfer Act 1952

94. Survey and CSD types[71]

Survey types for boundary marking[72]

Depending on the complexity of the survey, a boundary marking survey must be either a:

- '**Monumentation survey**' which is recorded in Landonline as a 'Boundary Marking – Monumentation CSD'; or
- **'boundary reinstatement survey**'; which is recorded in Landonline as a 'Boundary Marking – Reinstatement CSD';or
- '**full survey**' which requires a full CSD and in Landonline is recorded as a 'Boundary Marking – Full CSD (Conflict)').

  Note the term 'full' is an informal term used in this guide to refer to a survey which includes witnessing, PRMs, etc and a CSD which includes information relating to definition, vectors, reporting, etc (refer to 'full' CSD for boundary marking survey below).

Refer to Boundary reinstatement survey CSD type and Figure 69: Types of surveys and CSDs for recording boundary marks below

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[71] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

[72] text changed to clarify application of Landonline

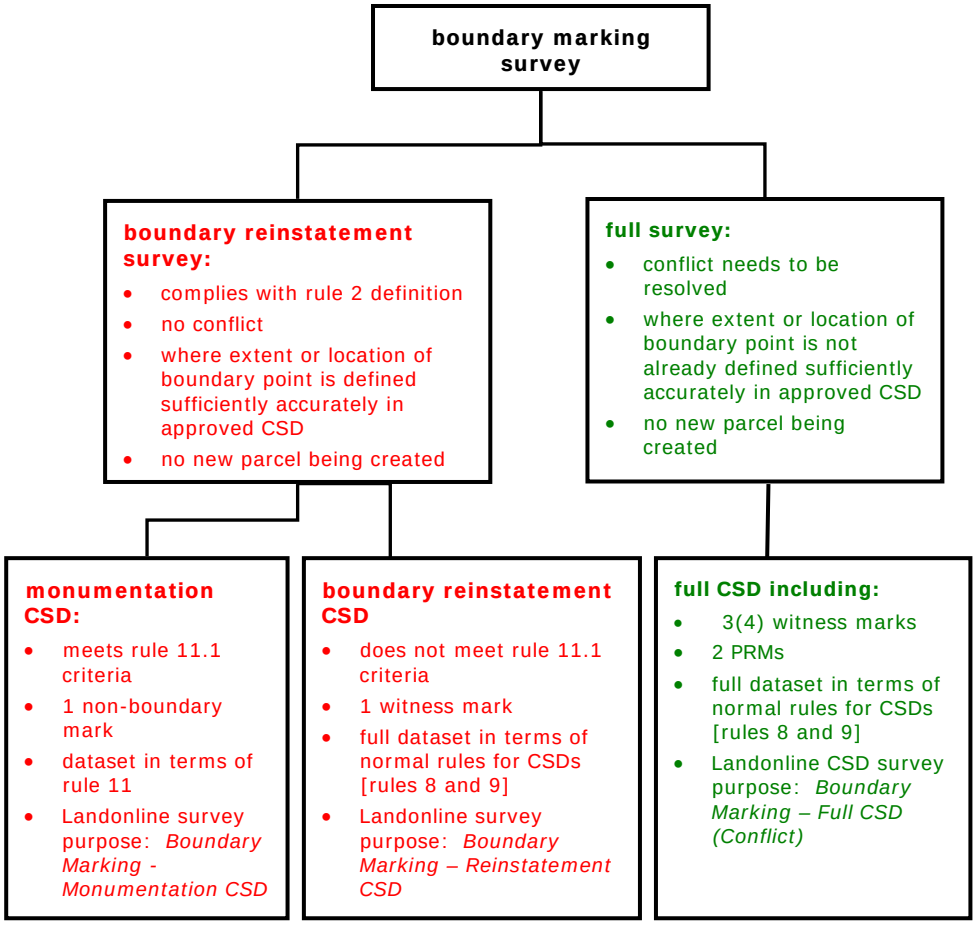

Figure 69: Types of surveys and CSDs for recording boundary marks

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Boundary reinstatement survey CSD type

- Depending on the quality of the existing survey work and the survey marks found, a boundary reinstatement survey may be recorded on one of two different types of CSDs:
  - **Boundary Marking - Monumentation CSD**: Where rule 11.1 criteria are able to be met, a boundary reinstatement survey without witness marks may be completed and recorded on a monumentation CSD [r 8.5(c)] (refer to Monumentation CSD usage and Summary of survey and CSD requirements below).
  - **Boundary Marking - Reinstatement CSD.** Where rule 11.1 criteria are not able to be met, a boundary reinstatement survey with one witness mark but no PRMs [r 7.3.2(d) and r 7.4.1(b)] is to be completed and recorded on a CSD that complies with all the data requirements of rules 8.1, 8.2, and 9 (refer to Summary of survey and CSD requirements below).
- The surveyor may choose to prepare a **reinstatement CSD** even though the **monumentation CSD** criteria are able to be met.
- Where the survey does not meet the criteria for a boundary reinstatement survey (refer to definition of 'boundary reinstatement survey' in rule 2), then a full survey is required (see 'full' CSD for boundary marking survey below)

Line peg on boundary reinstatement survey

- The placement of a boundary line mark meeting the criteria specified in *LINZR65309: Ruling allowing a survey that places a boundary mark on an existing line to be a boundary reinstatement survey* can be treated as a boundary reinstatement survey, even though it is not reinstating a previously defined point.
- A monumentation CSD is not appropriate in these cases.

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'full' CSD for boundary marking survey

- Where an existing boundary has been located, but the survey does not comply with the criteria for a boundary reinstatement survey [r 2], a full survey must be carried out.
- This survey must include three witness marks [r 7.3.1(a)] and two PRMs [r 7.4.1(a)].

  Examples where a full survey must be carried out are where:

  - the boundary point is subject to conflict [r 6.2(a)(vi)]
  - the location of the boundary point is not sufficiently defined in an approved CSD [r 6.2(a)(vii)] (this includes boundary positions that are defined only on a 'diagram on transfer').
- The survey purpose for a full survey in Landonline is **Boundary Marking - Full CSD (Conflict).** The CSD must include all the data requirements specified in rules 8.1, 8.2 and 9 (refer to Summary of survey and CSD requirements below).

95. Monumentation CSD usage[73]

Purpose of monumentation CSD

A monumentation CSD records in the cadastre the placement of a boundary mark in the position of a previous boundary mark or boundary point.

Authoritative information on monumentation CSD

- Despite the reduction in information required in a monumentation CSD, the CSD must still be certified [r 13] and must comply with the relevant rules [s 9(a) Cadastral Survey Act 2002]. The information is therefore authoritative.
- The historic 'approval for record purposes' option is not available (refer to Record purposes only CSDs above).

Ruling on monumentation CSD usage

Ruling *LINZR65314 Ruling to enable more boundary reinstatement surveys to be recorded on monumentation CSDs* provides an exemption from rules 11.1(a)(v) – (viii) in all cases. This means that a monumentaton CSD may be used where the conditions in rules 11.1(a)(i)–(iv) have been met.

When monumentation CSD must not be used

A monumentation CSD must not be used:

- when conflict needs to be resolved to correctly determine the boundary position [r 11.1(b)]. In this case a 'full' CSD must be lodged (refer to 'full' CSD for boundary marking survey above); or
- where a boundary mark is placed on an existing boundary in terms of ruling LINZ65309 (ie a line mark). In this case a boundary reinstatement survey must be completed (refer to Boundary reinstatement survey CSD type above).
- for recording only survey offsetting or survey traverses [r 11.1(a)]. In these cases, the CSD type is 'Survey information'.

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[73] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

Monumentation CSD usage, continued

Each position to be defined by survey on monumentation CSD

Each boundary position that is marked and recorded in a monumentation CSD must be defined by survey [r 6.2(v)]. This means that all evidence must be used to determine its correct position [r 6.1].

Boundary point must exist in cadastre for monumentation CSD

- A monumentation CSD must only be used to record the placement of a new mark at an existing boundary point [r 11.1(a)]. For boundary mark types [r 7.2], refer to Where a stake has been used to indicate a boundary position above.
- The placement of a line peg on an existing boundary where the point is not already recorded in the cadastre must be recorded in a boundary reinstatement CSD (refer to *LINZR65309: Ruling allowing a survey that places a boundary mark on an existing line to be a boundary reinstatement survey*).

Boundary point must be class A or B for monumentation CSD usage

A monumentation survey must only be used where the point is a class A or class B boundary point [r 11.1(a)(i)].

Non boundary mark and boundary point from same CSD for monumentation CSD

- For the purpose of a monumentation survey, the boundary mark must be placed in terms of an old non-boundary mark [r 11.1(a)(ii)]. The old non-boundary mark does not need to have the attributes of a witness mark [r 11.2(b)].
- The boundary point and the old non-boundary mark must have been previously recorded in the **same CSD** and that CSD must have been fully approved as to survey [r 11.1(a)(iii)].

  Where the CSD that records the old survey mark did not find, place, or reinstate the boundary mark or point, then rule 11.1(a)(iii) has not been met. In this case, a boundary reinstatement CSD will need to be lodged and will include the adoptions used to determine the relationship between the old survey mark and the boundary point.
- Marks that are only recorded on datasets 'approved for record purposes only' must not be used.

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Monumentation CSD usage, continued

Accuracy between existing marks for monumentation CSD	The existing accuracy between the boundary point and the old non-boundary mark must meet the boundary witnessing accuracy standard specified in rule 3.6 [r 11.1(a)(iv)] before a monumentation CSD can be used.

96. Monumentation CSD rule exemptions[74]

Additional rule exemptions for monumentation CSD

- Rule 11.2 specifies a number of exemptions for a monumentation CSD, including exemptions from the requirement to:
  - be orientated in terms of an official projection [r 4.1(a)],
  - connect to witness marks [r 7.3],
  - connect to PRMs [r 7.4],
  - include a CSD Plan in accordance with rule 9 [r 8.1(a)]. A CSD Plan is required in terms of rule 11.3,
  - include vectors in the CSD to ascertain and verify the relationship between all marks [r 8.1(d)]. One or more vectors are required on the Diagram of Survey [r 11.4.1(d)],
  - include a minimum of two vectors for each mark [r 8.1(e)],
  - include a survey report [r 8.2].
- In addition to these specified exemptions, a monumentation survey is not required to connect to a cadastral survey network mark that is close by [r 4.2].

[74] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

97. Summary of survey and CSD requirements[75]

Summary of survey and CSD requirements for boundary marking

There are different requirements for each type of boundary marking surveys and their associated CSDs (refer to Boundary reinstatement survey CSD type and 'full' CSD for boundary marking survey above). These requirements are summarised in the following table.

Rule	**Boundary Marking - Monumentation CSD** (recording a 'boundary reinstatement survey' that meets the criteria of rule 11.1)	**Boundary Marking - Reinstatement CSD** (recording a boundary reinstatement survey that does not meet the criteria of rule 11.1) or a **Boundary Marking – Full CSD (Conflict)** (recording a full survey)
PRMs	Not required [r 11.2(c])]	• **Full survey** must have a minimum of 2 PRMs [r 7.4.1(a)] • **Boundary reinstatement survey** is not required to include a PRM [r 7.4.1(b)]
Witnessing	Not required [r 11.2(b]). The old survey mark does not need to meet the witness mark criteria of r 7.3.3(b).	• **Full survey** must have a minimum of 3 (or 4) witness marks [r 7.3.2(c)] • **Boundary reinstatement survey** must have minimum of one witness mark [r 7.3.2(d)].
Survey Report	Not required [r 11.2(e)]	Normal requirements for both **Boundary reinstatement survey** and **Full survey** [r 8.2(a)]
Vectors in the CSD	Marks must be joined by one or more vectors which are depicted on the Diagram of Survey [r 11.4.1(d)].	Normal requirements for both **Boundary reinstatement survey** and **Full survey** (sufficient vectors to enable the relationship between the points to be ascertained [r 9.6.13(a)] and verified [r 8.1(d)]. This will normally require more than one vector between the points and can include adopted vectors).
Marks in the CSD	Must include boundary mark(s) placed and the old non-boundary survey mark [r 11.4.1]. Other old marks, such as might be used to obtain orientation or provide reliability, are not required (but can be included).	Normal requirements for both **Boundary reinstatement survey** and **Full survey** including old, new or adopted marks that have been used to determine the position of the marked boundary.
Two vectors for each point/mark	Not required [r 11.2(d)].	Normal requirements for both **Boundary reinstatement survey** and **Full survey**.

[75] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

98. Content of CSD recording boundary marking[76]

Rules relating to CSD recording boundary marking

8.1	content of CSD
9.6	Diagram of Survey
11.3	Monumentation CSD plan
11.4.1	Information on a Diagram of Survey
11.4.2	Survey mark information

Title Plan not required for CSD recording boundary marking

A Title Plan is not required in a CSD recording the placement of a boundary mark [r 8.1(b) and 11.3]. This is because a new parcel is not being created.

Key plan components of CSD recording boundary marking

- A CSD recording boundary marking is required to include only a CSD Plan [r 8.1(b) and 11.3].
- This CSD plan consists of both diagrammatic and non-diagrammatic information.
- The diagrammatic information must be depicted on a Diagram of Survey [r 9.6.1 and 11.3(b)(v)].

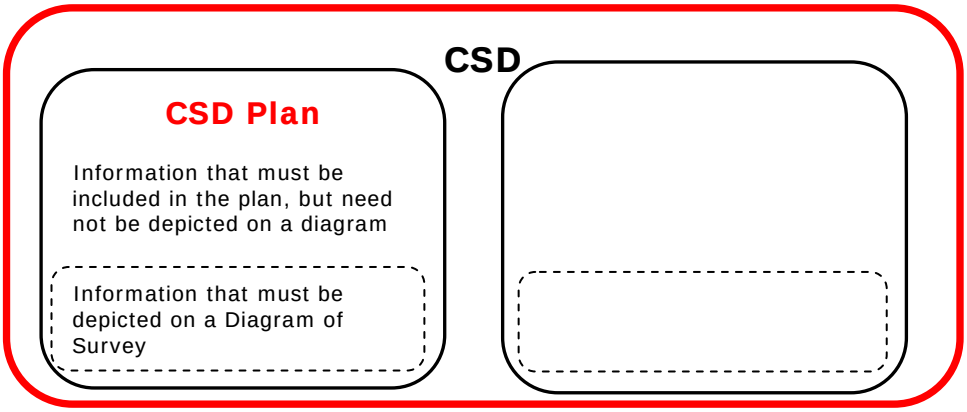

Figure 70: Components of a CSD recording boundary marking

[76] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

99. Content of Boundary Marking - Monumentation CSD[77]

Rules relating to monumentation CSD content

11.3 Monumentation CSD plan

11.4.1 Information on a Diagram of Survey

11.4.2 Survey mark information

Key plan components of monumentation CSD

A monumentation CSD includes diagrammatic and non-diagramatic information in a CSD Plan (refer to Content of CSD recording boundary marking above).

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[77] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

Content of Boundary Marking - Monumentation CSD,

continued

Diagrammatic information on the Diagram of Survey for monumentation CSD

In a monumentation CSD, the Diagram of Survey must include:

- the old non-boundary mark and the new boundary mark [r 11.4.1(a) and (c)]. Other marks (including traverse marks) used in the survey may be, but are not required to be, depicted,
- at least one vector between the non-boundary mark and the new boundary mark [r 11.4.1(d)]. This vector may be measured or calculated,
- parcel appellation information for adjoining parcels [r 11.4.1(b)],
- mark types (other than a peg or post) [r 11.4.2(a)] and names [r 11.4.2(b) and (c)], and
- a north point [r 11.4.3(c)].

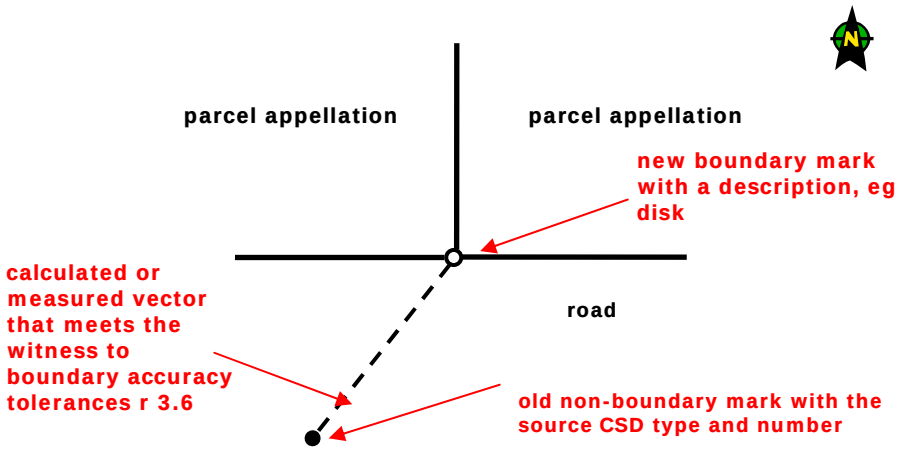

Figure 71: Simple monumentation CSD Diagram of Survey

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Content of Boundary Marking - Monumentation CSD,

continued

Non-diagrammatic information in the CSD Plan for monumentation CSD

In a CSD Plan for a monumentation CSD, information which is not required to be represented diagrammatically includes:

- the surveyor's certification [r 11.3(b)(i)],
- information on the horizontal datum and circuit used in the survey [r 11.3(b)(ii)],
- the CSD reference of the approved CSD (refer to **approved CSD** in rule 11.1) [r 11.3(b)(iii)], and
- occupation information [r 11.3(b)(iv)] (refer to Occupation and physical features above).

Non-diagrammatic information may be on Diagram of Survey for monumentation CSD

In a CSD Plan, the non-diagrammatic information may be included on the Diagram of Survey. Its inclusion on the diagram satisfies rules 11.3(b)(i) – (iv).

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Content of Boundary Marking - Monumentation CSD,

continued

Landonline capture of a monumentation CSD

- For a **Boundary Marking - Monumentation CSD**, the following is the minimum Landonline capture requirements:
  - all new boundary marks must be captured (the non-boundary mark/s used to set out the boundary mark need not be captured)
  - the CSD must be connected to at least two nodes existing in Landonline, and
  - the nodes must be connected by non-boundary vectors.
- Upon capture of this information, Landonline requires an image to be produced in the CSD Plan using the plan generation functionality. This image becomes part of the Diagram of Survey.
- In addition to these capture requirements, Rules 11.3 and 11.4 specify some additional information that has to be included on a Diagram of Survey (eg the old non-boundary mark, and vectors joining it to the boundary mark; adjoining appellations). These requirements can be satisfied either by using Landonline capture functionality, or by attaching a 'plan graphic' supporting document. In most cases there would be little difference between the information required to be captured and the information required by the Rules to be in the CSD.
- Where a plan graphic has been added there will be two plan images comprising the Diagram of Survey – the one generated by the Landonline plan generation functionality, plus the plan graphic.

Additional information in monumentation CSD

- Other non-mandatory information may be included in the monumentation CSD. Examples include adoptions, survey marks, and 'traverse' vectors related to the boundary marking survey. Note that this additional information must be consistent with all other information required by the Rules.
- This information can be provided using either a 'plan graphic' supporting document or by using the normal capture and plan generation functionality in Landonline.
- Where the plan graphic has been added there will be two plan images comprising the Diagram of Survey – the one generated by the Landonline Plan Generation functionality, plus the plan graphic.

100. Content of Boundary Marking - Reinstatement CSD[78]

Rules relating to boundary reinstatement CSD content	8.1 Content of a CSD 8.2 Survey Report 9 CSD plan
Key plan components boundary reinstatement CSD	A boundary reinstatement CSD includes diagrammatic and non-diagramatic information in a CSD Plan (refer to Content of CSD recording boundary marking above).
CSD information for a boundary reinstatement CSD	A boundary reinstatement CSD requires information to support the definition including a survey report, vectors to ascertain and verify the positions, and adoptions. This information is specified by rules 8.1, 8.2, and 9.1 – 9.6.
Landonline capture of a boundary reinstatement CSD	• For a **Boundary Marking - Reinstatement CSD**, the **Boundary Marking - Monumentation CSD** e-capture and plan generation functionality in Landonline may be used. • Alternatively, the normal full capture functionality may be used.

continued on next page

[78] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

Content of Boundary Marking - Reinstatement CSD,

continued

Where monumentation CSD functionality is used for boundary reinstatement CSD

- If the **Boundary Marking - Monumentation CSD** e-capture and plan generation Landonline functionality is used for a **Boundary Marking - Reinstatement CSD**, the following is the minimum Landonline capture requirements:

  - all new boundary marks must be captured (the non-boundary mark/s used to set out the boundary mark need not be captured)

  - the CSD must be connected to at least two nodes existing in Landonline, and

  - the nodes must be connected by non-boundary vectors.

- Where a survey places a line mark at a new point on an existing boundary the two existing boundary marks on either side of the new line point and the vectors to them from the new point will also have to be captured.

- With the capture of this information, Landonline requires an image to be produced in the CSD plan using the plan generation functionality. This image will become part of the Diagram of Survey.

- In addition to these capture requirements, the additional information supporting the definition, including the vectors to ascertain and verify the positions, and adoptions as specified by current rules 8.1, and 9.1 – 9.6, may be provided in a suitably drawn field note or diagram attached to the CSD as a 'plan graphic' supporting document.

  Note, all information must be legible, clear, and unambiguous [r 9.6.15].

- Where the plan graphic has been added there will be two plan images comprising the Diagram of Survey – the one generated by the Landonline Plan Generation functionality, plus the plan graphic

- Note, the CSD must still include a survey report, and provide details supporting the definition [r 8.2(a)(ix)].

101. Content of Boundary Marking - Full CSD (Conflict)[79]

Rules relating to boundary reinstatement-full CSD content

8.1 Content of a CSD

8.2 Survey Report

9 CSD plan

Key plan components boundary marking -full CSD (conflict)

A Boundary Marking – Full CSD (Conflict) includes diagrammatic and non-diagramatic information in a CSD Plan (refer to Content of CSD recording boundary marking above).

CSD information for a boundary marking -full CSD (conflict)

- In Landonline, the CSD type is **Boundary Marking - Full CSD (Conflict)**.
- This full CSD requires information to support the definition including a survey report, vectors to ascertain and verify the positions, and adoptions. This information is specified by rules 8.1, 8.2, and 9.1-9.6.

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[79] this chapter entitled 'CSDs to record boundary marking' (including sections 92 – 101) replaces sections 91 (CSDs recording boundary marking and related surveys) and 94 – 98 (Monumentation CSDs overview, Background, Information, Monumentation CSD usage, Monumentation CSD rule exceptions, Content of a monumentation CSD) of previous guide

102. CSDs to record survey information only

Rules relating to CSD recording survey information only	8.1 Content of a CSD
CSD may be prepared for recording survey data	A CSD may be prepared to record the placement of a non-boundary mark or to record new or adopted survey measurements (eg survey traverses).
Title Plan not required where recording survey information only	A CSD that records survey information only does not create a new parcel and therefore a Title Plan is not required [r 8.1(b)] (refer to Title Plan not required where no new parcel above).
Witness marks and PRMs not required where recording survey information only	A CSD that records survey information only does not place any boundary marks and therefore witness marks and PRMs are not required [r 7.3.1 and r 7.4.1].
Accuracy standards required for survey information only	In a CSD that records survey information only, the non-boundary marks must meet the relevant accuracy standards specified in rule 3.1.

103. CSDs to record unit title developments

Plan requirements for unit developments[80]

The depiction of FDUs, units, and common property differs according to whether the CSD reflects a standard, layered, or subsidiary development or a redevelopment. The different plan requirements are outlined in *LINZG20720: Interim guideline for Unit Titles Act 2010*.

[80] text changed to clarify application of legislation

104. Datasets for other than cadastral purposes

Historical plan purposes not under rules

- Historically, plans such as electoral plans, parliamentary plans, airshed plans, and some graphical description plans, have been lodged in the cadastre for a variety of purposes. As these are not cadastral survey datasets, they are not provided for under the Rules or this interpretation guide.
- Some types of graphical description plans did define the extent of a right or interest in land. In these cases, the appropriate CSD must be used (eg a reserve re-classification CSD could be a 'legalisation' CSD).

Datasets for non-cadastral purposes

LINZ does allow the lodgement of some specialist datasets for recording in Landonline that are not cadastral survey datasets in terms of the Cadastral Survey Act 2002. Application to LINZ must be made prior to the lodgement of any dataset which is not certified in accordance with the cadastral rules.

Recording marks and points

105. Overview

Introduction to requirements relating to the recording of survey mark and point information in the CSD

The primary evidence of boundary location (ie boundary points and marks) must be recorded in a consistent and appropriate manner. This ensures that the information is correctly located and referenced in the cadastre and that future users can interpret the information correctly.

This chapter explains the rules relating to how all marks and points must be recorded and referenced in a CSD.

Links to mark and point information and symbology required in a CSD

This chapter contains the following section:

106. Information and symbology

Rules relating to the recording of survey marks

9.6.2 Survey mark and point information

12.2 Survey mark symbols

Recording new marks and points on the Diagram of Survey

- On a Diagram of Survey, new marks and points are depicted with the symbol types specified in rule 12.2 and survey mark and point information specified in rule 9.6.2. The following table illustrates the information requirements for these marks and points.
- Historically, identifiers were required for boundary points. While this is no longer the case, they can be added to the CSD if the surveyor considers they will enable the data to be more easily interpreted (shown as optional in the table below).
- A reinstated mark is treated as a new mark (refer to Reinstated mark above)

	Physical mark type	New identifier	Symbol	Example
New witness mark	√	√	new	 IT 3
New PRM	√	√	new	 IT 5
New non-boundary mark (eg traverse)	√	√	new	 IS 3
New unmarked non-boundary point		√	new	 8
New boundary peg or post	√	optional	new	
New boundary mark (other than peg or post)	√	optional	new	 LP
New unmarked boundary point		optional	new	

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Recording old marks and points on the Diagram of Survey

On a Diagram of Survey, old marks and points are depicted with the symbol types specified in rule 12.2, and survey mark and point information specified in rule 9.6.2. The following table illustrates the information requirements for these marks and points.

	Old mark type	Original identifier (if exists)	Original CSD ref	Symbol	Example
Old non-boundary mark	√	√	√	old	● IT VI DP214
Old non-bdy mark, now a witness mark for the purpose of the survey	√	√	√	old	◉ IT 3
Old non-bdy mark, now a PRM for the purpose of the survey	√	√	√	old	◎ IT 5
Old boundary peg or post		√	√	old	● LP DP 214 ■ DP 214
Old marked boundary mark (other than peg or post)	√	√	√	old	● LP DP 214 ● DP 214

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Recording adopted marks and points on the Diagram of Survey

On a Diagram of Survey, adopted marks and points are depicted with the symbol types specified in rule 12.2 and survey mark and point information specified in rule 9.6.2. The table below illustrates the information requirements for these marks and points.

	Original identifier (if exists)	Original CSD ref	Symbol	Example
Adopted marked non-boundary mark (including if a witness mark on the original CSD)	√	√	adpt	◯ VI DP214
Adopted unmarked non-boundary point	√	√	adpt	✕ VI DP214
Adopted marked boundary mark (peg or other mark type)	√	√	adpt	◯ DP 214
Adopted marked boundary mark (post)	√	√	adpt	□ III DP 214
Adopted unmarked boundary point	√	√	adpt	✕ DP 214 ✕ III DP 214

Recording disturbed marks on the Diagram of Survey

On a Diagram of Survey, disturbed marks are depicted with symbol types specified in rule 12.2 and survey mark and point information specified in rule 9.6.2. The table below illustrates the information for these marks.

	Mark type	Original ID	New ID	Origin CSD ref	Symbol	Notation	Example
Disturbed non-boundary mark	√	if it exists	√	√	new	disturbed	◯ IS 3 (VI DP214 Dist)
Disturbed boundary mark		if it exists		√	new	disturbed	◯ (XV DP 214 Dist) □ (DP 214 Dist)

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Recording renewed marks and points on the Diagram of Survey

On a Diagram of Survey, renewed marks are depicted with the symbol types specified in rule 12.2 and survey mark and point information specified in rule 9.6.2. The table below illustrates the information required for these marks.

	Old mark type	New mark type	Original ID	New ID	Origin CSD ref	Symbol	Notation	Example
Renewed non-boundary mark, now a witness mark for the purpose of the survey	√	√	if it exists	√	√	old	renewed	 IT 4 (IS VI DP214 ren)
Renewed boundary peg or post	√		if it exists		√	old	renewed	 (Peg DP 214 ren)  IS (Peg DP 214 ren)
Renewed boundary mark (other than peg or post)	√	√	if it exists		√	old	renewed	 IS (LP DP 214 ren)
Old peg renewed IT, now a PRM for the purpose of the survey	√	√	if it exists		√	old	renewed	 IT 5 (peg DP 254)

Exception to depicting boundary points on the Diagram of Survey

Boundary points on an existing easement boundary not severed by the creation of a new underlying boundary are not required to be shown on a Diagram of Survey [r 9.6.3(f)(ii)] (refer to Vectors not required for unaffected non-primary parcel on a Diagram of Survey below).

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Name of control marks on the Diagram of Survey

- Where the mark is from the national survey control system, the mark's name from that system must be used [r 9.6.2(i)].
- Note, the geodetic code is not part of the name for CSD purposes although it may be included on the diagram.

Recording vectors and dimensions

107. Overview

Introduction to survey and boundary vector information required in a CSD

CSDs must include vector information that describes the survey relationship between all marks and points. This enables the points and marks to be correctly located in the cadastre and for users to set out and relocate these positions in the future.

This chapter explains the rules that specify:

- vectors that define and verify the spatial relationships, and
- boundary dimensions.

Links to survey and boundary vector information required in a CSD

This chapter contains the following sections:

108. Vector types

Vector components

The components of a vector are a bearing and distance.

Vector types

- A vector may be either adopted from an existing survey or measured or calculated.
- The Rules do not specify that measured vectors must be provided in a CSD.
- The diagram below illustrates two ways of using measured vectors and calculated vectors to ascertain the relationship between four marks. Both methods achieve the same result.
- Surveyors may wish to distinguish between **calculated** and **measured vectors** in a CSD to indicate to future users how they undertook the survey and how the vector was determined. The interpretation of what constitutes a measured vector and a calculated vector is left to the surveyor. Rule 9.3(c) requires that the CSD indicates whether the vector is calculated, measured, or adopted, and rule 12.3 specifies the appropriate line style where the vector is depicted on a diagram.

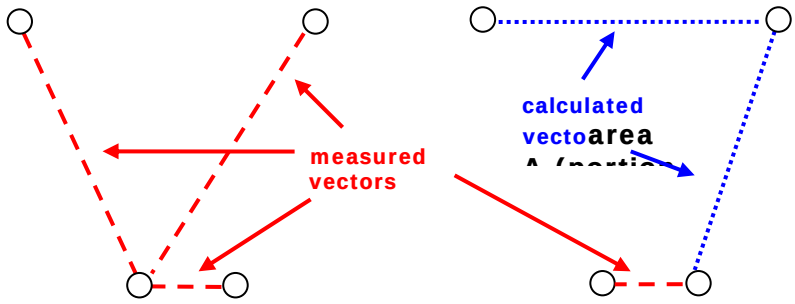

Figure 72: Two methods of ascertaining the relationship between marks

109. Demonstrating accuracies in a CSD

Rules relating to vectors in a CSD

8.1 Content of a CSD

Number of vectors required to each survey point in CSD and CSD Plan

- To ascertain the relationship between any two marks or points, they must be connected by a vector.
- To **verify** the relationship between these points, additional vectors are needed (ie by forming a closed circuit). Rule 8.1(d) requires that a CSD (but not necessarily the CSD Plan or Diagram of Survey) must include sufficient vectors to both **ascertain and verify** the relationships.
- The CSD Plan must include sufficient vectors to **ascertain** the relationships.

Vectors between marks and points in a CSD

A CSD must include sufficient vectors to enable the relationship between all points and marks to be ascertained and verified in accordance with the accuracy standards [r 8.1].

This applies to:

- new and old PRMs and witness marks
- new and old non-boundary (traverse) marks and points. Note that rule 8.1(d)(i) includes non-boundary **points** (in addition to non-boundary **marks**). Non-boundary points are locations where a physical mark was not placed in the ground
- boundary marks and points
- points on water boundaries and irregular boundaries (refer to Vectors for water boundary or irregular boundary in a CSD below)[81].

(refer to Accuracy of non-boundary marks)

continued on next page

[81] text changed to clariy interpretaton of rule 8.1

Number of vectors to each mark or point in a CSD

- At least two vectors are required for all boundary points, each new boundary mark, and each new PRM and witness mark, [r 8.1(e)]. These marks must not be left hanging. The second vector may be measured, calculated, or adopted.
- For old non-boundary marks, while a single vector is necessary to ascertain the relationship, a second vector may not be necessary to verify this relationship. This will depend on how this old mark is held in the cadastre (Landonline):
  - The positions of marks that are survey-accurate (eg by their SDC status or coordinate order), can be used to provide verification, but
  - where the position of a mark in the cadastre is not survey-accurate, additional vectors may be required to verify the accuracy between that mark and other marks and points.

(refer to Accuracy of non-boundary marks above)

Vectors to distant control marks[82]

- Where a vector to a control mark is a long way from the parcel under survey and the vector is not required for the purpose of ascertaining or verifying a position, or to satisfy the requirement to connect to the control network, it is recommended that this vector is not captured.
- Instead, the vector could be noted in the survey report or could be included with field notes or as part of calculation data. Refer also to Survey report must include basis for determining the orientation of bearings below.

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[82] text changed to clarify application of rule in Landonline

Vectors for water boundary or irregular boundary in a CSD[83]

- The requirement that there must be a minimum of two vectors for each boundary point [r 8.1(e)] also applies between the end points of a water boundary or an irregular boundary and other boundary points.
- On the Diagram of Survey only one of these vectors is required to be shown to each point [r 9.6.13(c)].
- The Rules do not require intermediary points along a water boundary resulting from, for example, field ties, to be included in the CSD. However if such points are included, then two vectors to each point are required in the CSD [r 8.1(e)] although only one is required on the Diagram of Survey.
- These vectors can be directly between each end point or, alternatively, to other boundary points or other non-boundary marks.

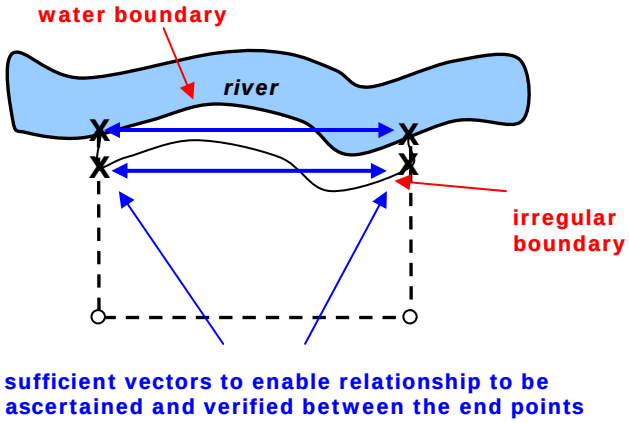

Figure 73: Additional vectors for water boundary or irregular boundaries

[83] text changed to clarify interpretation of rule r 8.1 & 9.6.13

110. Vectors on a Diagram of Survey

Rules relating to vectors on a diagram of Survey

9.6.13 Vectors

Vectors between all marks and points on a Diagram of Survey

A Diagram of Survey must include sufficient vectors to enable the survey relationship between all points and marks to be **ascertained** in accordance with the relevant accuracy standards [r 9.6.13(a)]. The vectors in the CSD that **verify** these relationships are not required on the diagram.

This means a Diagram of Survey must depict at least one vector to each mark and point, and every point must be connected to every other point by one or more vectors. This applies whether the points or marks are new, old, or adopted.

Vectors not required for unaffected non-primary parcel on a Diagram of Survey

The requirement to depict sufficient vectors on a Diagram of Survey to ascertain the relationship between boundary marks and points does not apply to an existing non-primary parcel (eg an easement parcel) not severed by the creation of a new underlying parcel boundary [r 6.13(b)(i)].

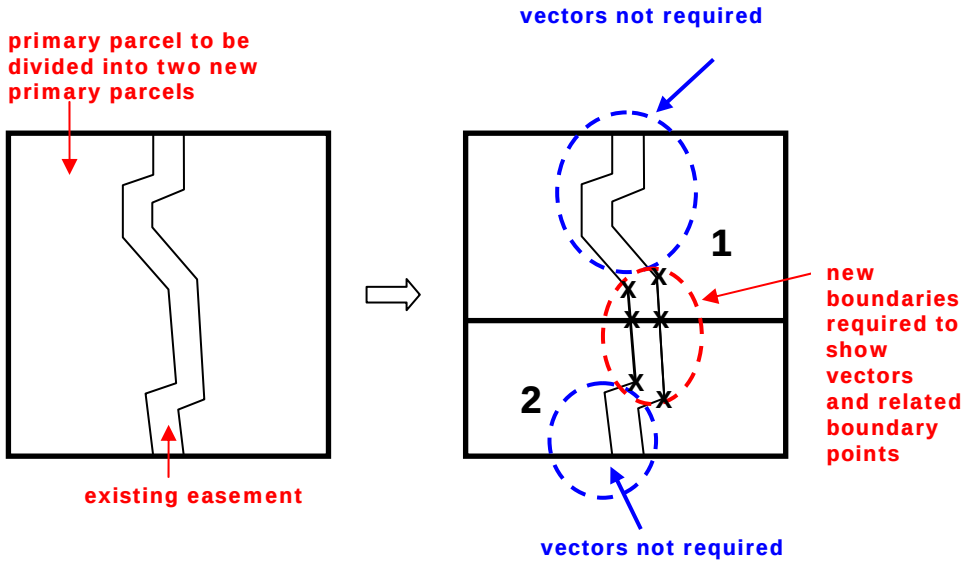

Figure 74: Vectors for an existing easement

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Vectors for accepted boundaries on a Diagram of Survey

The requirement to depict sufficient vectors on a Diagram of Survey to ascertain the relationship between boundary marks and points does not apply in the case of accepted boundaries and boundary points [r 9.6.13(b)(ii)]. One example is residue parcels.

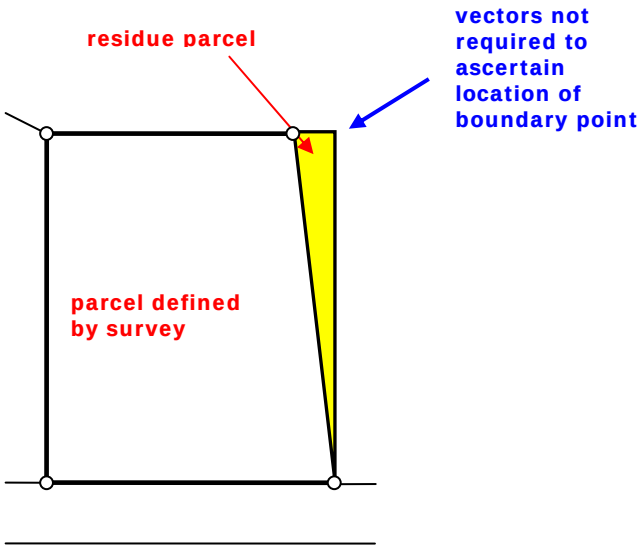

Figure 75: Accepted boundaries on a residue parcel

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Vectors for water and irregular boundaries on a Diagram of Survey

- A Diagram of Survey must include sufficient vectors to enable the points and marks at the end of water and irregular boundaries to be related to other boundary points [r 9.6.13(c)].
- Historically, the practice was to include a 'scaled' distance extending from a boundary mark or point to the water boundary.
- To comply with rule 9.6.13(c), this vector must meet the boundary accuracy standards. A suitable computed value will satisfy this requirement.

These requirements also apply to irregular boundaries.

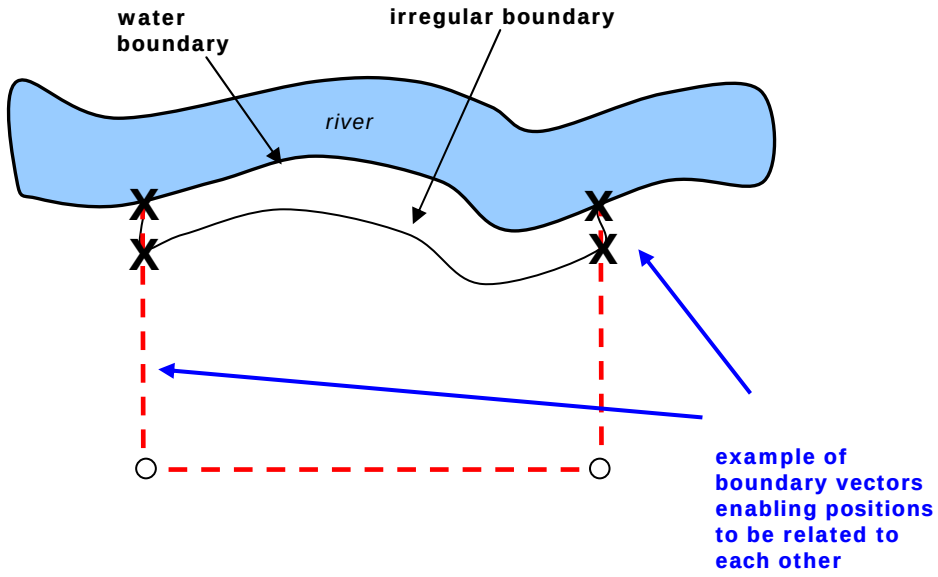

Figure 76: Vectors to ascertain position of end points

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Vectors on a Diagram of Survey, continued

Adopted vectors on a Diagram of Survey

- Adopted vectors used for the purposes of boundary definition, must be depicted on a Diagram of Survey [r 9.6.13(d)] unless they cannot be clearly shown [r 9.6.3(e)]. In this case, the line work must be shown and the vector dimensions referenced and recorded in the CSD Plan.

- This includes poor quality traverse vectors and abutting boundary vectors used as the best evidence of a boundary location (refer to Boundary points to which the right-line and arc boundary accuracy tolerances apply to above). Note ,the practice of not electronically capturing these vectors in the CSD and recording them on a calculation sheet is not appropriate.

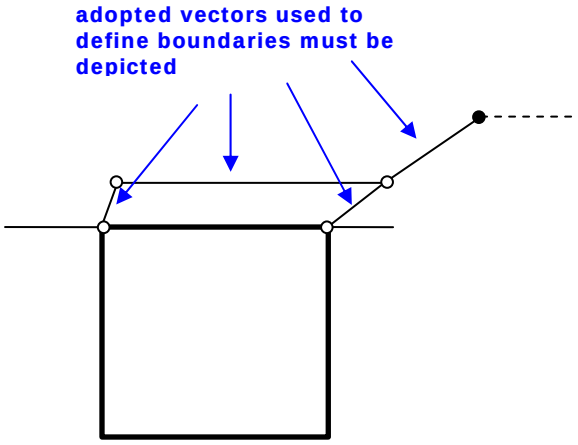

Figure 77: Adopted vectors depicted on the diagram

Where impractical to show vectors on a Diagram of Survey

- Where the vectors that the Rules require to be depicted are numerous or extend beyond the parcel under survey, the historical practice of only including the vectors in a traverse sheet, rather than on the Diagram of Survey, is not permitted.

- Where it is impractical to clearly show the vector dimensions (bearing and distance) on a Diagram of Survey, the line-work for the vector must still be depicted [r 9.6.13(e)]. The vector dimension must be included in the CSD Plan clearly referenced back to the related line-work on the diagram [r 9.6.15(a)].

111. Boundary dimensions

Rules relating to recording boundary dimensions

9.6.12 Boundary annotations

9.6.14 Boundary dimensions

10.4.9 Boundary dimensions

Historical exceptions to recording dimensions do not apply

- Historically, boundary dimensions were sometimes not required to be depicted when a parcel was a Class IV Parcel Diagram or a balance parcel in terms of rule 19(2A) SG Rules 2002/2. These exceptions no longer apply.
- Boundary dimensions must be shown on a Diagram of Survey [r 9.6.14] and boundary distances on Diagram of Parcels [r 10.4.9].

Exception for recording boundary dimensions for existing easements

Boundary dimensions are not required to be depicted on a Diagram of Survey and Diagram of Parcels where an existing non-primary parcel (eg an easement parcel) is to be retained and its boundaries are not severed by the creation of a new underlying parcel boundary [r 9.6.14(b)(i) and r 10.4.9(a)(i)] (refer to Recording easement parcels below).

Exception for recording missing bearings or distances or magnetic bearings

In the case of accepted boundaries:

- When there are missing bearings or distances, a Diagram of Survey must depict the bearings or distances that exist in the cadastral record [r 9.6.14(b)(ii)]. The boundary must be annotated 'bearing unknown' or 'distance unknown', as appropriate [r 9.6.12].
- A magnetic bearing is not required to be depicted, but the boundary must be annotated 'magnetic bearing' [r 9.6.12].
- A Diagram of Parcels must depict the boundary distance where that distance exists [r 10.4.9(a)(ii)]. No boundary annotation is required.

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Exception for recording residue parcel boundary dimensions

Boundary dimensions are not required to be depicted on a Diagram of Survey and a Diagram of Parcels where the vectors for accepted boundaries are not common with a new parcel [r 9.6.14(b)(iii) and r 10.4.9(a)(iii)] (refer to Recording residue parcels below).

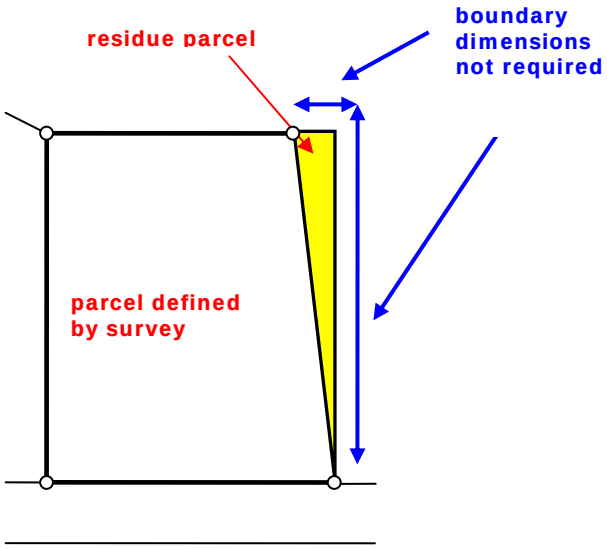

Figure 78: Accepted boundaries on a residue parcel

Recording boundaries

112. Overview

Introduction to the requirements relating to recording boundaries

It is essential that the cadastre and land title documents record boundaries in an unambiguous manner.

This chapter explains the rules that relate to how boundaries must be recorded in a CSD.

Links to the how to record boundaries and their spatial relationships in a CSD

This chapter contains the following sections:

Recording boundary relationships

113. Depiction of boundary relationships

Depicting the spatial relationship of boundaries[84]

- Depiction of the spatial relationships between boundaries [r 9.6.3(f) and (g)] is primarily through the pictorial display of the boundaries in diagrams.
- The diagrams must depict all of the boundaries that are relevant and display the relationship between them. This applies in a horizontal and vertical context. The boundaries cannot be shown in isolation or not shown and merely referenced to preceding CSDs.
- The spatial relationships must be clear and unambiguous [r 9.6.15(a) and r 10.4.10(a)]. Cross-sections are often an appropriate method of depicting the relationship between stratum boundaries or between upper and lower permanent structure boundaries.
- The depiction of boundaries in a plan graphic [r 9.6.9] without dimensions is all that is necessary where there is a mixture of permanent structure boundaries, and mathematically described boundaries (eg right-lines or reduced levels), and the relationship between the boundaries is clear and unambiguous.

  Note, where there is a risk of a boundary overlap or where the gap between two boundaries is not clear and unambiguous, more information is required [r 9.6.9(b)]. In some cases, this could be horizontal or vertical dimensions (refer to Depicting the relationship of unit and cross lease boundaries where they are close below).

[84] text changed to clarify interpretation of rules 9.6.3, 9.6.9, 9.6.15 and 10.4.10

Recording right-line boundaries

114. Depiction of right-line boundaries

[Guidance material to be developed when required]

Recording arc boundaries

115. Depiction of arc boundaries

[Guidance material to be developed when required]

Recording stratum boundaries

116. Depiction and description of stratum boundaries

Rules relating to recording stratum boundaries

6.8 Stratum boundary

9.6.7 Water boundaries

9.6.10 Stratum boundaries

10.4.5 Water boundaries

Recording stratum boundary where it is mathematically described

A Diagram of Survey must describe the spatial relationship between the stratum boundary and the other boundaries [r 9.6.10]. This information must meet the boundary accuracy standards and boundary witnessing standards (refer to Boundary witness accuracy applies to boundary points and stratum boundaries above).

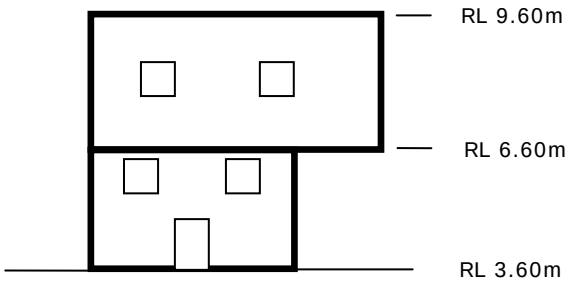

Figure 79: Elevation view depicting two non-primary parcels

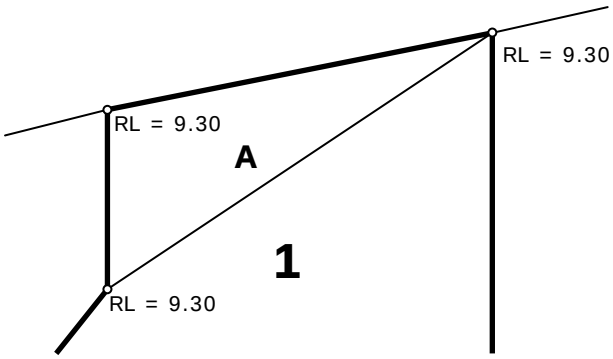

Figure 80: One method of describing a height covenant

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Depiction and description of stratum boundaries,

continued

Recording witness marks and PRMs for stratum boundary[85]

- Most of the information relating to a unit CSD or cross lease CSD is depicted on plan graphics.
- Where a stratum boundary is used, the required witness marks and PRMs and vectors between them (refer to rules 7.3.1(d), 7.3.2, 7.43(d), and 9.6.10) must be electronically captured and depicted in Landonline generated diagrams.
- In this case, the Diagram of Survey will include a plan graphic of the units plus an additional Landonline generated diagram of the marks and vectors.

Recording stratum boundary where it is surface or bed of a water boundary

- Where a stratum boundary is the surface or the bed of a water body, the Diagram of Survey and Diagram of Parcels must describe the legal boundary that is the stratum boundary [r 9.6.7(c) and r 10.4.5(c)]. Examples are '80 m contour (Moturiki Datum)' or 'bed of lake'.
- Note, the requirement for a legal description must not be confused with the physical description although, in some cases, they may be the same (refer to CSD diagrams must include the legal boundary description below).

[85] text changed to clarify application of rules in Landonline

Recording water boundaries

117. Overview

Introduction to recording water boundaries in a CSD

Because parcels bounded by water boundaries are subject to specific survey and legal considerations, it is essential that CSDs record current and former positions of relevant water body margins correctly, clearly, and unambiguously.

This section explains the rules that specify how a water boundary must be recorded in a CSD.

Links to the recording of water boundaries, accretion, dry bed, erosion, common marine area and vesting seabed

This section contains the following topics:

118. Depiction and description of water boundaries

Rules relating to recording water boundaries

9.4 Boundary information

9.6.7 Water boundaries

10.4.5 Water boundaries

Depiction of water boundary must be to scale and maintain shape in CSD diagrams

- On a Diagram of Survey and a Diagram of Parcels, a water boundary must be depicted as an irregular line at a scale that shows its true shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)].
- Where the scale required to include the full boundary on a diagram could result in ambiguity or a lack of clarity (eg a long narrow stream where banks appear to merge), the water boundaries may be copied at a larger scale onto separate additional diagrams and, if necessary, distorted so that the information is clear and unambiguous.
- Note that depiction of a water boundary on a Diagram of Survey must also be at a scale that reflects relevant accuracy specifications [r 9.6.7(a)(ii)] (refer to Accuracy of water boundaries and irregular boundaries above).

Using water boundaries from the Landonline database

- Where water boundary information is extracted from Landonline and it is to be used in a new CSD, its shape and location must be verified from the original source datasets. This is because its shape and location in the spatial cadastre (Landonline) has often been distorted by the process of capture and maintenance and may not truly reflect the shape and location as surveyed.
- Note that 'adopted from Landonline' or 'DCDB' are not acceptable references. The stated source of the adoption must be the CSD that defined the water boundary [r 9.4(b)].

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Depiction and description of water boundaries, continued

CSD diagrams must include the legal boundary description

- A Diagram of Survey and Diagram of Parcels must describe the legal water boundary [r 9.6.7(c) and r 10.4.5(c)]. In the case of a parcel adjoining:
  - the common marine and coastal area or tidal river, this will normally be MHWM or MHWS in the horizontal plane, or
  - a non-tidal watercourse or lake, this will normally be the left or right bank in the horizontal plane.
- In the case of a stratum boundary, the diagrams must describe both the horizontal plane and vertical plane (eg the surface or bed of the sea or river or a contour level).
- The **legal** boundary description must not be confused with the description of the **physical** feature required to be in the CSD Plan by rule 9.4(c). For example, the legal boundary may be **MHWM**, **MHWS**, **left bank**, or **right bank** while the physical feature that defines the boundary could be **top of bank** or **bottom of bank**

CSD diagrams must distinguish between MHWS and MHWM

- The distinction between MHWM and MHWS is legally significant, especially for existing parcels with boundaries set at MHWM and the impact of statutes such as the Resource Management Act 1991 and MACAA.
- Where the surveyor determines that the old position of MHWM and the new position of MHWS **do not** coincide, the depiction of the two positions must be clear and the land between the two positions dealt with correctly.
- Where the surveyor determines that the old position of MHWM and the new position of MHWS coincide (within the margins of survey accuracy) and the old MHWM boundary is adopted to represent MHWS, the diagram must be annotated to this effect. The label '**boundary is MHWS/MHWM'** is acceptable in this situation. In this case, the fact that the two boundaries coincide must be included in the survey report [r 8.2(a)(xii)].

CSD diagrams must include physical description

- Where a physical feature (eg bottom of bank or top of bank) defines a water boundary, this must be described in the CSD Plan [r 9.4(c)].
- The legal boundary description and the physical description must be clearly presented to avoid confusion between the two.

119. Where accretion or dried up water bed is not claimed

Requirements where entitlement to accretion or dried up waterbed not being claimed

- When the owner of land with an ambulatory water boundary decides not to claim accretion or title to a dried up water body (even though the margin of the water body has moved since the previous survey), the water boundary can continue to be depicted in its existing recorded position [r 6.7(b)]. The unclaimed dry land will remain part of the adjoining water body for the purposes of the cadastre and title record.

- The Diagram of Survey and Diagram of Parcels must:

  - Depict the adopted or accepted former water boundary in its existing position as an irregular line at a scale that clearly shows its shape and relationship to other boundaries of the parcel [r 9.6.7(a) and r 10.4.5(a)].

  - Show the relationship between the adopted or accepted water boundary and the physical water's edge, or include a statement that the parcel boundary and the water's edge are not coincident [r 9.6.7(b) and r 10.4.5(b)].

- The extent of the adjoining hydro parcel will remain unchanged. Although this hydro parcel is not required to be depicted on the diagrams, its name or description is required [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of a suitable description for a water body that does not have a name include **stream**, **river,** and **lake**.

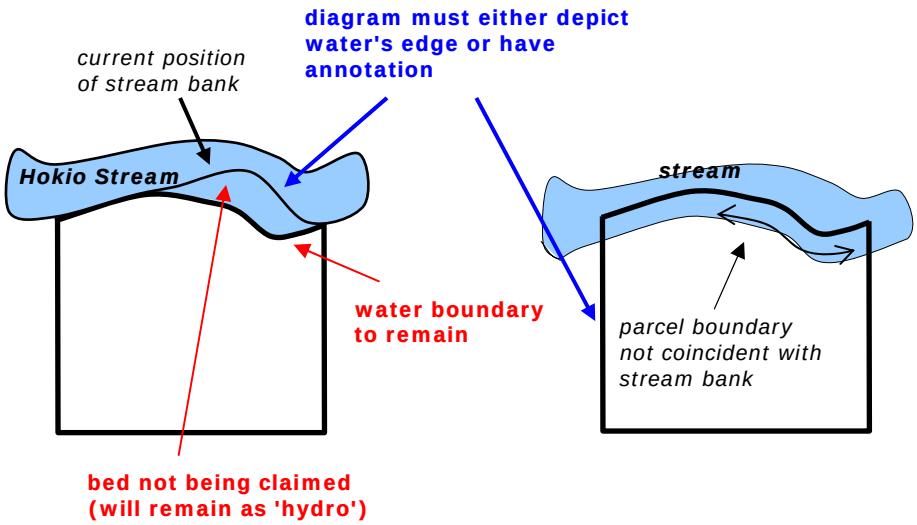

Figure 81: Where the bed is not being claimed

120. Where dry bed is being claimed

Depiction alternative where dry bed is being claimed

Where a dried bed is being claimed, the bed may either be depicted in conjunction with the adjoining land or as a separate primary parcel.

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Where dry bed is being claimed, continued

Requirements where a dry bed is being claimed and is depicted with the adjoining land

- Where a claim is being made for a dried up water bed, the area being claimed may be depicted with the adjoining land in a single primary parcel.
- The Diagram of Survey and Diagram of Parcels must depict:
  - the new primary parcel boundaries as marked right-line boundaries [r 6.5(a)(i) and r 7.1],
  - the former water boundary as an estate boundary that passes through the land under survey [r 9.6.3(h)(i) and r 10.4.2(f)(i)] and the estate record references, including that for the dried up water bed (eg **dry stream bed**), and
  - the name of the balance water body parcel abutting the new parcel, or a simple description if no name is available [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)].
- The portion of the water bed that is not being claimed will be a balance parcel. This parcel must be:
  - included in the CSD but need not be depicted on the diagrams,
  - an abutting parcel. It must not be given an appellation, but must be named or described [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of a description include **stream**, **river**, and **lake**.
  - given the parcel intent **hydro**.

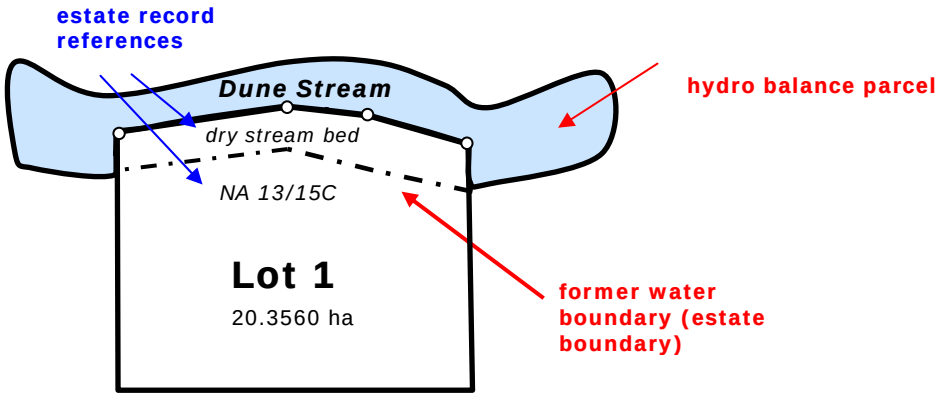

Figure 82: Stream bed being claimed with adjoining land

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Where dry bed is being claimed, continued

Requirements where a dry bed is being claimed and is depicted as a separate primary parcel

- Where a claim is being made for dried up water bed, the area being claimed may be depicted as a separate primary parcel.
- The Diagram of Survey and Diagram of Parcels must depict the bed being claimed as a parcel with:
  - all of the parcel boundaries right-lined and marked, unless class C [r 6.2], and
  - an appellation (eg Lot 1) and an area [r 5.5.1 and r 5.3(a)].
- The portion of the water body that is not being claimed will be a balance parcel. This parcel must be:
  - included in the CSD, but need not be depicted on the diagrams.
  - as an abutting parcel. It must not be given an appellation, but must be named or described [r 6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of a description include **stream**, **river,** and **lake**.
  - given the parcel intent **hydro.**

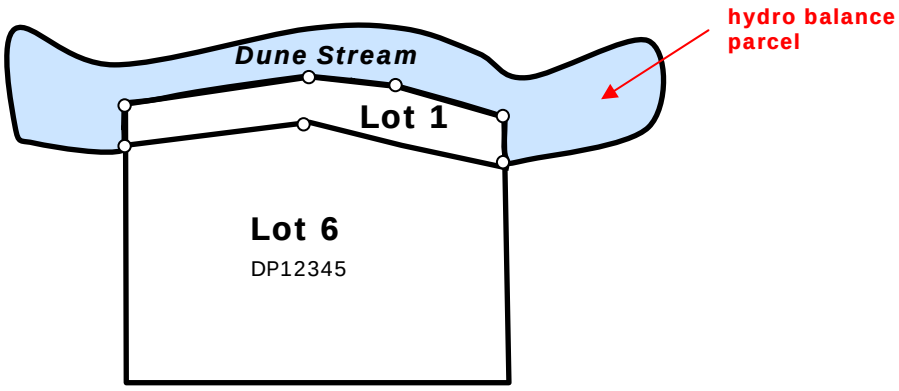

Figure 83: A stream bed being claimed as a separate parcel

121. Where accretion is being claimed

No separate parcel for accretion must be shown

Where the land owner plans to claim accretion, the land abutting the water body and the land claimed as accretion must be combined as a single primary parcel. A successful accretion claim results in the area of accretion being added to the estate record of the adjoining land.

Requirements where accretion is being claimed

- A Diagram of Survey and Diagram of Parcels must depict the:
  - water boundary as an irregular line in its new position at a scale that clearly shows its shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)]. This means the boundary must be shown to scale,
  - land being claimed as accretion with the description **accretion** [r 9.6.3(h)(ii) and r 10.4.2(f)(ii)] and with a separate area [r 9.6.3(e) and r 10.4.2(d)(iv)]. The total area of the new primary parcel must include the accretion area [r 9.6.3(e) and r 10.4.2(d)(iv)], and
  - former water boundary as an estate boundary that passes through the land under survey [r 9.6.3(h)(i) and r 10.4.2(f)(i)]; the annotation **accretion** is sufficient as the estate record reference for the accretion.
- The adjoining water body will be a balance hydro parcel which must be included in the CSD but need not be depicted in full on the diagrams. As an abutting parcel it must referenced with its name or description [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of a description of an unnamed water body include **stream**, **river,** and **lake**.

(refer to Accretion and erosion parcels and Water boundaries above)

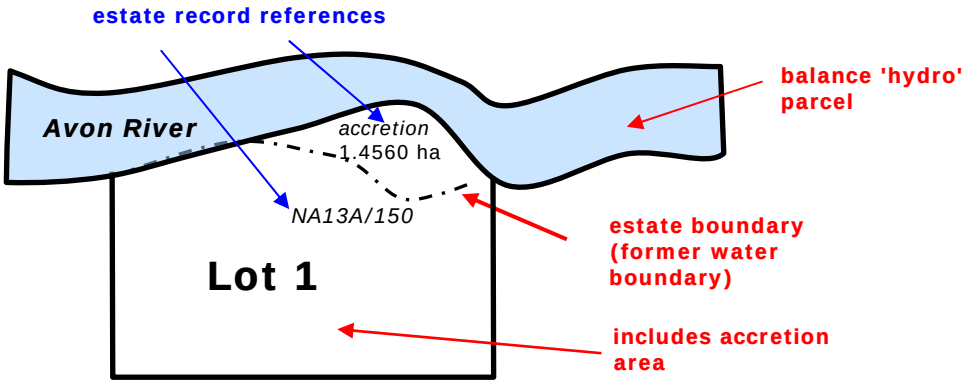

Figure 84: Depiction of accretion on diagrams

122. When depicting erosion

Requirements where erosion has occurred

- Where erosion has occurred, the Diagram of Survey and Diagram of Parcels must depict:
  - the erosion as a separate residue parcel, which must be described as **erosion** without any other description or appellation [r 9.6.3(h)(iii) and r 10.4.2(f)(iii)]. An area is not required,
  - the water boundary in its new position as an irregular line at a scale that clearly shows its shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)],
  - the former water boundary as an accepted irregular line boundary [r 6.3(b) and r 6.7(c)], and
  - the name or a simple description (such as **sea**, **stream**, **river,** or **lake**) for the water body that abuts the new erosion parcel r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]
- The erosion parcel must have the parcel intent **hydro.**

(refer also to Accretion and erosion parcels and Water boundaries above)

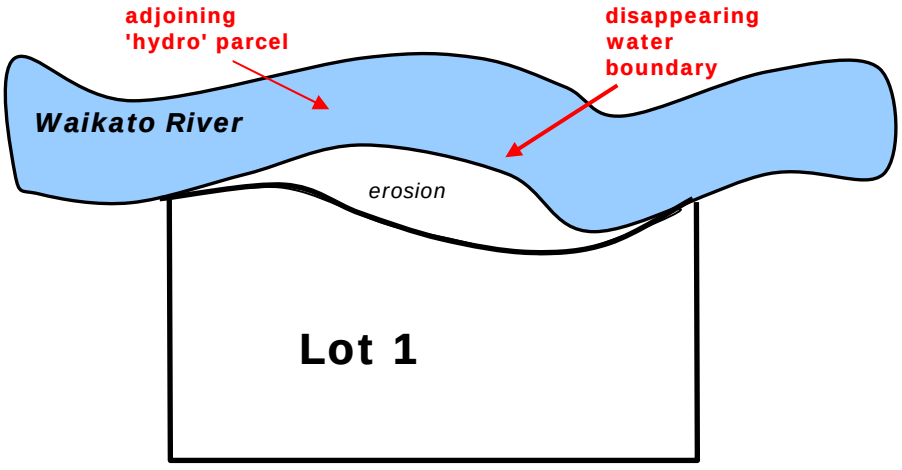

Figure 85: Erosion as a residual primary parcel

123. Water bed to vest or become part of common marine area

Where common marine and coastal area under s 237A of the RMA Act 1991[86]

- Where land within the coastal marine area is to become part of the common marine and coastal area under s 237A of the Resource Management Act 1991, the Diagram of Survey and Diagram of Parcels must depict:
  - the land as a new primary parcel,
  - any new water boundary as an irregular line at a scale that clearly shows its shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)], and
  - any old water boundary that is common with the adjoining water body (the disappearing boundary) as an irregular boundary [r 6.7(c), r 9.6.8, and r 10.4.6] (refer to Disappearing water boundaries may be accepted boundaries above).
- The primary parcel of land must be treated in the same manner as other primary parcels and must have an appellation and an area [r 9.6.3 and r 10.4.2(d)].
- The parcel will have the parcel intent **Common Marine and Coastal Area (sec 237A(1)(b) RM Act)**.
- The adjoining hydro parcel, where applicable, need not be fully depicted but must be named or described [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of descriptions are **sea, lake, river**.
- The Diagram of Parcels must include the notation 'Common Marine and coastal area' (refer Notations and memorials in Title Plan above).

The diagram in Figure 86 below shows an example.

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[86] text changed to clarify application of legislation

Water bed to vest or become part of common marine area, continued

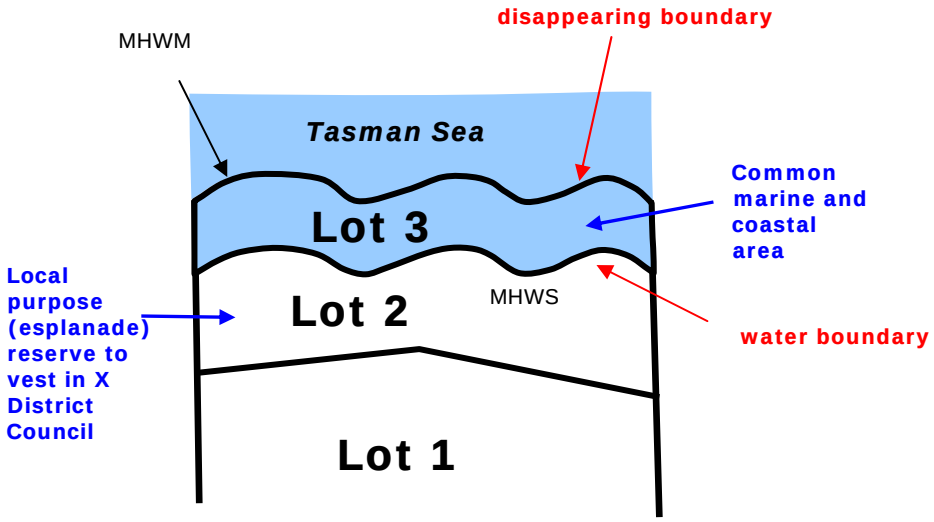

Figure 86: Common marine and coastal area under s 237A

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Water bed to vest or become part of common marine area, continued

Where land is to vest under ss 237A or 239(1)(c) RMA 1991[87]

- Where a parcel that is part of the bed of a river or lake is to vest under ss 237A or 239(1)(c) of the Resource Management Act 1991, the Diagram of Survey and Diagram of Parcels must depict:
  - the land to vest as a new primary parcel,
  - any new water boundary as an irregular line at a scale that clearly shows its shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)], and
  - any old water boundary that is common with the adjoining water body (the disappearing boundary) as an irregular boundary [r 6.7(c), r 9.6.8, and r 10.4.6].
- The primary parcel of land to vest must be treated in the same manner as other primary parcels and must have an appellation and an area [r 9.6.3 and r 10.4.2(d)] (refer to Disappearing water boundaries may be accepted boundaries above).
- The parcel must have the parcel intent **Vesting on deposit in the Territorial Authority (Sec 237A(1)(a) RM Act)** or **Vesting on deposit in the Crown (Sec 239(1)(c) RM Act)** as applicable. Upon vesting and integration into the spatial cadastre, the appellation will not be visible.
- The adjoining hydro parcel, where applicable, need not be fully depicted but must be named or described [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples of descriptions are **sea, lake, river**.
- The Title Plan must include a notation regarding a vesting of land (refer Notations and memorials in Title Plan above).
- Note, land to vest under ss 237A or 239(1)(c) RMA 1991 includes land that is defined by fixed boundaries.

The diagram in Figure 87 below shows an example.

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[87] text changed to clarify application of legislation

Water bed to vest or become part of common marine area, continued

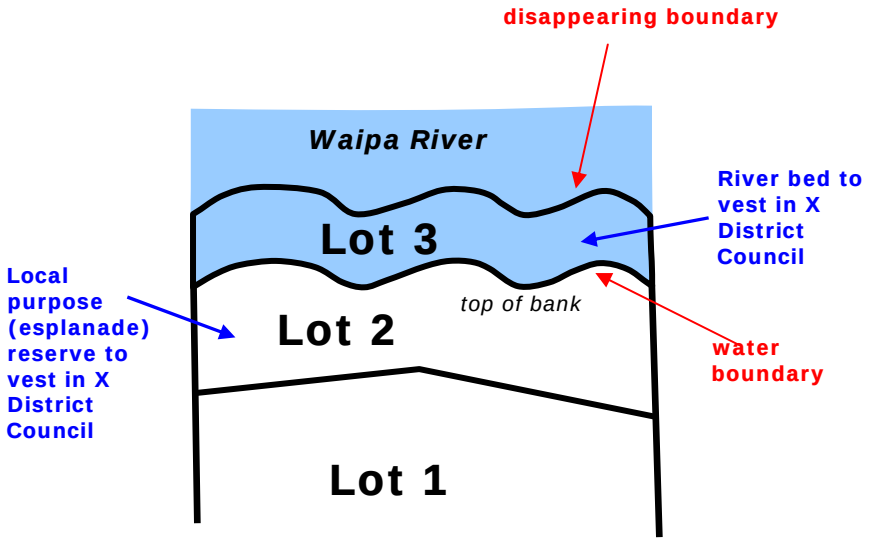

Figure 87: River bed vesting under s 237A or 239(1)

124. Water bed excluded from new title

Requirements where a water course is excluded from a new title

- A previously undefined watercourse in an existing primary parcel must not be included in lots on a new subdivision, where it is the intention that a new title will not issue for that watercourse. An example is when the subdivision uses the stream banks as the boundary between new parcels and the territorial authority does not require the streambed to vest under s 237A of the Resource Management Act 1991.

- The Diagram of Survey and Diagram of Parcels must depict the:

  - new water boundaries as irregular lines at a scale that clearly shows their true shape and relationship to other boundaries [r 9.6.7(a)(i) and r 10.4.5(a)].

  - watercourse as a residue parcel. This residue parcel must not have an appellation but must show its name or a description [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Where the water course is unnamed, examples of a suitable description include **stream**, **river,** and **lake.** An area is not required [r 5.3].

- The residue parcel will have the parcel intent **hydro**.

- A parcel of stream bed should not be given an appellation (eg Lot 3) unless it is intended to vest the bed or have a title issued.

- The survey report must confirm the intention to exclude the bed from any new title to be issued [r 8.2(a)(i)].

Note, the above illustrates one method of dealing with stream beds. Different requirements will apply where alternative methods, such as including the stream within one of the new parcels, have been used.

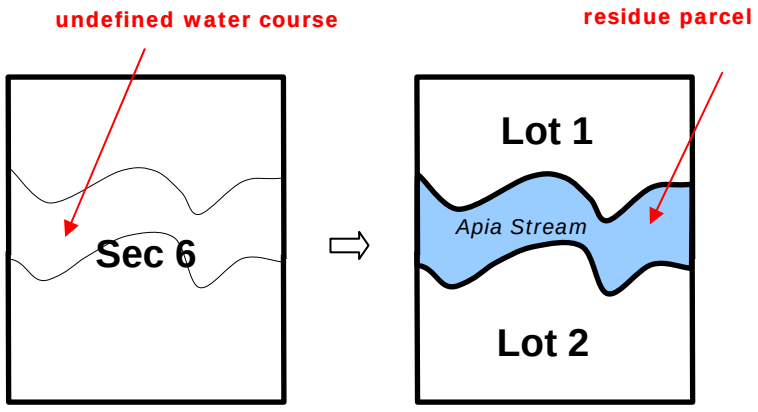

Figure 88: A stream being a residue parcel

Recording irregular boundaries

125. Depiction of irregular boundaries

Rules relating to recording irregular boundaries

9.6.8 Irregular boundaries

10.4.6 Irregular boundaries

Recording irregular boundaries to scale in the diagrams

- On a Diagram of Survey and Diagram of Parcels:
  - an irregular boundary must be depicted to show its true shape and relationship to other boundaries [r 9.6.8(a) and r 10.4.6], and
  - where information that is to scale is unclear or ambiguous (eg a long narrow parcel where an irregular boundary and an adjoining stream boundary appear to merge), these boundaries may be shown as distorted in separate diagrams.
- On a Diagram of Survey, the scale must be adequate to meet the accuracy requirements of rule 3.4 [r 9.6.8(b)].

(refer to Accuracy of water boundaries and irregular boundaries above).

Recording permanent structure boundaries

126. Depiction and description of permanent structure boundaries

Rules relating to recording permanent structure boundaries

9.6.4 Parcel information for a unit title development

9.6.5 Parcel information for a cross lease development

9.6.9 Permanent structure boundaries

9.6.15 Interpretation of information on a Diagram of Survey

10.4.2 Parcel information

10.4.3 Parcel information for a unit title development

10.4.7 Permanent structure boundaries

10.4.10 Interpretation of information on a Diagram of Parcels

Depicting existing unit boundaries in a CSD[88]

- *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward* enables unit and common property boundaries which have been defined in a CSD under earlier Rules to be used in a later CSD. This applies in the case of a subsequent stage of a unit development or where part of an existing unit development is being changed,
- This enables existing boundaries to be depicted in exactly the same manner they were depicted on the pre 2010 rule CSDs.
- Note, the ruling may only be applied to boundaries where no changes are being made to the related parcel boundaries, appellation, and CFR.
- Where an existing stratum boundary is being adopted, the Diagram of Survey must include the same information as the originating CSD (refer to Vertical datum where stratum unit boundary has been adopted above).

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[88] text changed to clarify application of *LINZR65310: Ruling enabling units defined prior to 2010 Rules to be carried forward*

Depiction and description of permanent structure boundaries, continued

Recording permanent structure boundaries where horizontal extent of a permanent structure boundary is coincident with structure

- Where a permanent structure boundary is coincident with a physical structure, the Diagram of Survey and Diagram of Parcels must depict the relationship between the boundary and the structure clearly and unambiguously [r 9.6.9, r 9.6.15, r 10.4.7, and r 10.4.10]. The diagrams must also describe the permanent structure [r 9.6.9(d) and r 10.4.7(c)]

  This relationship can be depicted or it can be annotated and the annotation can be applied to individual boundaries or it could be a generic note, provided that the relationship is clear in every instance of the boundary.

- Where the boundary and the relationship to the structure are the same for each unit, the relationship to the physical structure does not have to be depicted around the full extent of every unit. Generic diagrams may be used, and may be distorted to provide clarity, provided they are referred to on a main diagram.

Two examples are shown in Figure 89: Where horizontal boundary coincides with the structure below

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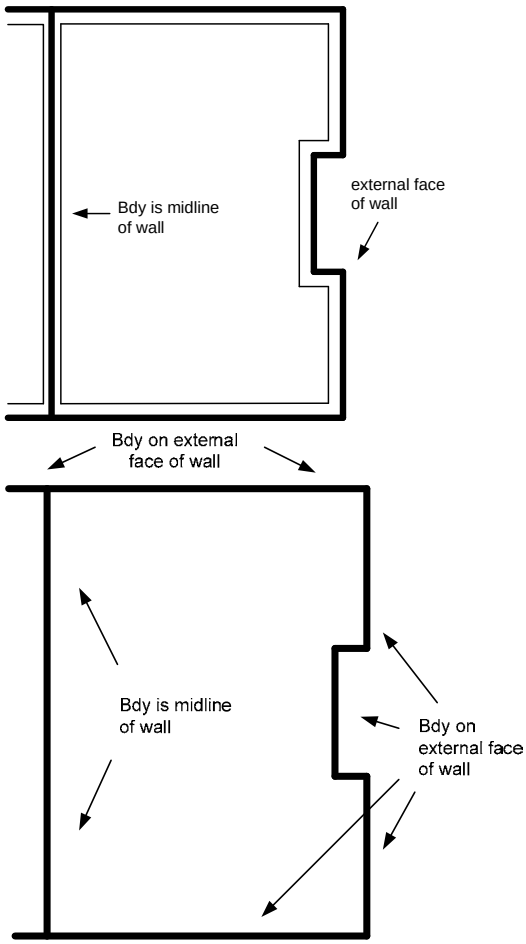

Figure 89: Where horizontal boundary coincides with the structure

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Depiction and description of permanent structure boundaries, continued

Recording permanent structure boundaries where vertical extent of a permanent structure boundary is coincident with structure

- Where the boundary is coincident with a physical structure, the Diagram of Survey and Diagram of Parcels must make the relationship between the boundary and the structure clear and unambiguous [r 9.6.9, r 9.6.15, r 10.4.7, and r 10.4.10]. The diagrams must also describe the permanent structure [r 9.6.9(d) and r 10.4.7(c)]
- This relationship can also be depicted or annotated provided it is clear.

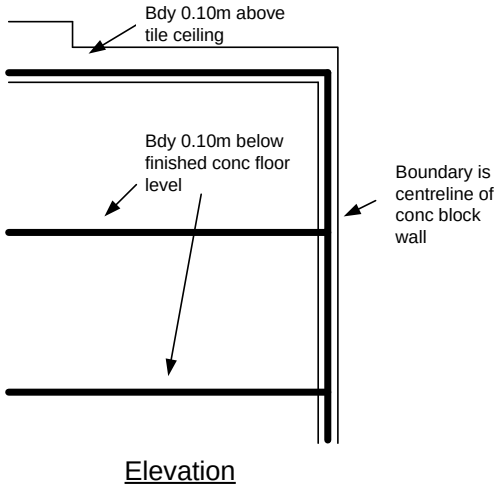

Figure 90: Where vertical boundary coincides with structure

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Depiction and description of permanent structure boundaries, continued

Recording permanent structure boundaries where permanent structure boundary is coincident with underlying parcel boundary

- Where the permanent structure boundary coincides with the underlying primary parcel boundary, the relationship of the physical structure to the boundary must be clearly depicted, particularly where the structure extends beyond the boundary [r 9.6.9, r 9.6.15, r 10.4.7, and r 10.4.10].
- Generic diagrams may be used and may be distorted to provide clarity, provided that they are referred to on the main diagram.
- The diagrams must also describe the permanent structure [r 9.6.9(d) and r 10.4.7(c)].

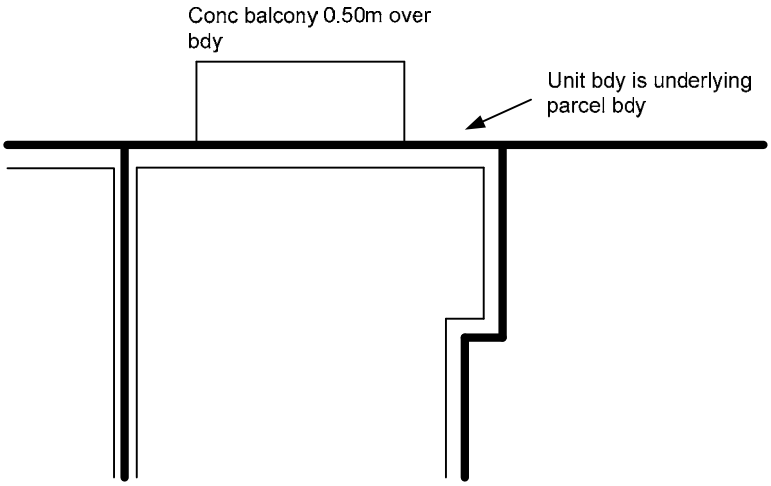

Figure 91: Bird's-eye view where unit boundary coincides with underlying boundary

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Depiction and description of permanent structure boundaries, continued

Recording permanent structure boundaries where horizontal permanent structure boundary is not coincident with structure

- A permanent structure boundary that extends beyond the physical structure to intersect with another boundary must be clearly defined. An example is where that boundary follows the extension of the centreline of the wall to where it meets the external boundary [r 9.6.9, r 9.6.15, r 10.4.7, and r 10.4.10].
- Two examples are shown below

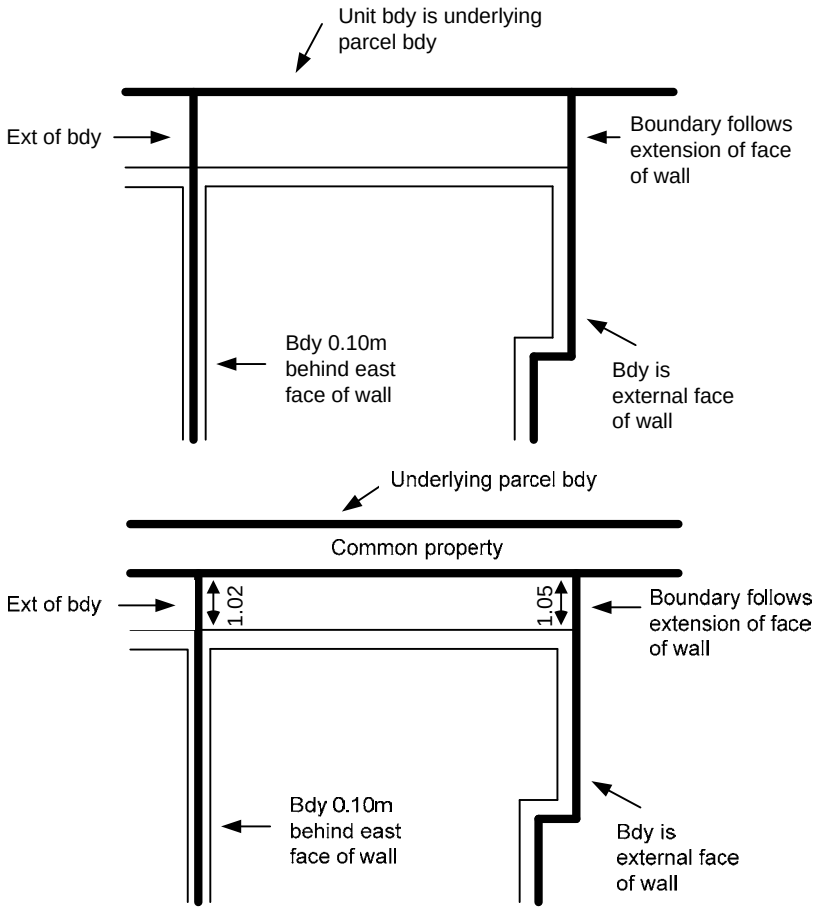

Figure 92: Birds eye view where the unit boundary extends beyond the physical structure

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Depiction and description of permanent structure boundaries, continued

Recording permanent structure boundaries where vertical permanent structure boundary is not coincident with structure

- In some cases, a unit boundary will be located in space above (or below) the physical structure. Such boundaries can be defined by dimensions (usually vertical distances) from clearly defined points on the structure [r 6.9(b), r 9.6.9, and r 10.4.7].
- The 20m limit specified in rule 6.9(b)(ii) only applies in a horizontal sense.

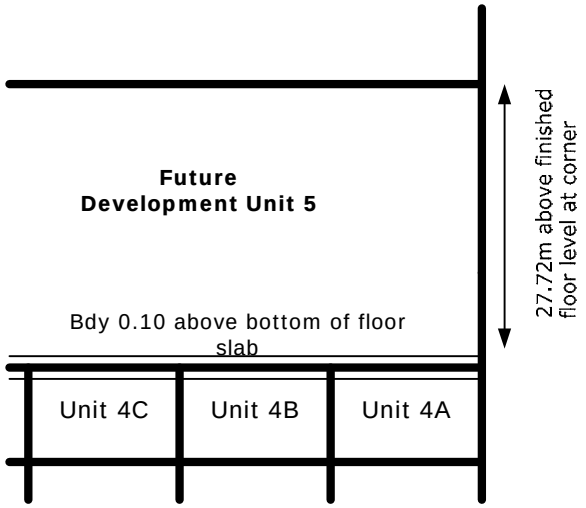

Figure 93: Elevation where unit boundary is in space above structure

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Depiction and description of permanent structure boundaries, continued

Depicting the relationship of units and cross lease areas to estate boundaries in the CSD diagrams

- For a unit title development, the land the plan relates to is to be held in only one computer register and should be the whole of the land in that computer register [s 32(1)(b) and (c) of the Unit Titles Act 2010]. However, if one computer register could be issued for that land, the plan can be deposited despite s 32(1)(b) and (c) [s 33(1) of the Unit Titles Act 2010][89].
- Where there is more than one underlying primary parcel within an estate record (see Figure 94: A unit development over two underlying parcels below where Lots 1 and 2 are in the one title), the spatial depiction of unit boundaries with any underlying primary boundaries internal to the estate boundary **is not required** [r 9.6.4(b) and r 10.4.3(b)]. This means that the 'internal' primary boundary is not required to be depicted.
- For a cross lease development, where there is more than one underlying primary parcel within an estate record the spatial depiction of cross lease boundaries with any underlying primary boundaries internal to the estate boundary **is required** [r 9.6.5(b) and r 10.4.2(e)(i)].

Depicting the relationship of units and cross lease areas to primary parcel boundaries in the CSD diagrams

- On a Diagram of Survey and Diagram of Parcels, the depiction of the spatial relationship between each unit or cross lease boundary and the underlying primary parcel boundaries must be sufficiently clear to ensure there is no ambiguity as to their relative positions [r 9.6.4(b), r 9.6.6(b), r 9.6.15(a), r 10.4.3(b), r 10.4.10(a)].
- The depicted relationship must comply with the accuracy standard in r 3.5 if within 1 m of another boundary (class A) or 3 m (for class B) (refer to Accuracy of permanent structure boundaries above).
- The depicted relationship also relates to the units and the underlying parcel boundary. This information can be depicted on the same plan graphic diagrams as the units[90].

(see Figure 94: A unit development over two underlying parcels.)

continued on next page

[89] text changed to clarify application of legislation

[90] text changed to clarify interpretation of rules 9.6.4(b), 9.6.6(b), 9.6.15(a), 10.4.3(b) & 10.4.10(a)

Depiction and description of permanent structure boundaries, continued

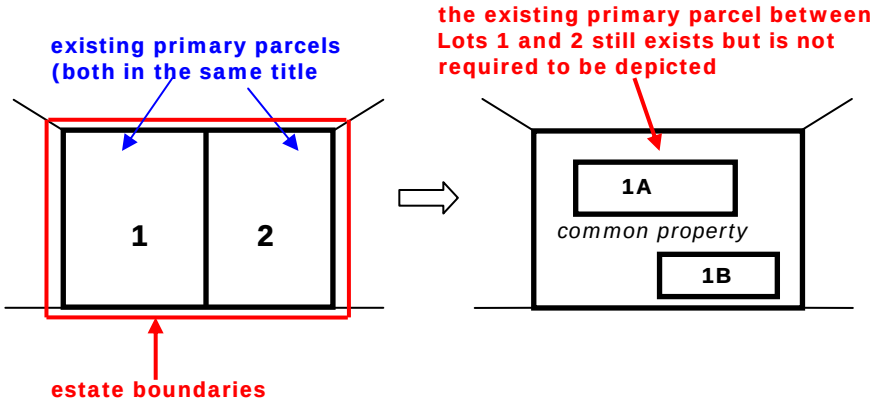

Figure 94: A unit development over two underlying parcels

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Depiction and description of permanent structure boundaries, continued

Depicting the relationship of unit and cross lease boundaries where they are close

- The depiction of the spatial relationship between each unit or cross lease area and every other non-primary parcel in the CSD must be sufficient to ensure an unambiguous spatial relationship between the parcels within the development [r 9.6.4(a), r 9.6.9(b), r 9.6.5(a), r 9.6.15(a), r 10.4.3(a), and r 10.4.10(a)].
- The relationship must be depicted to match the accuracy standard in r 3.5 if within 1 m of another boundary (class A) or 3 m (for class B) (refer to Accuracy of permanent structure boundaries above).

  In most cases, this relationship on the Diagram of Survey will be the distance between the units[91].
- The Rules do not require survey traverses and ties to buildings to be part of a CSD.

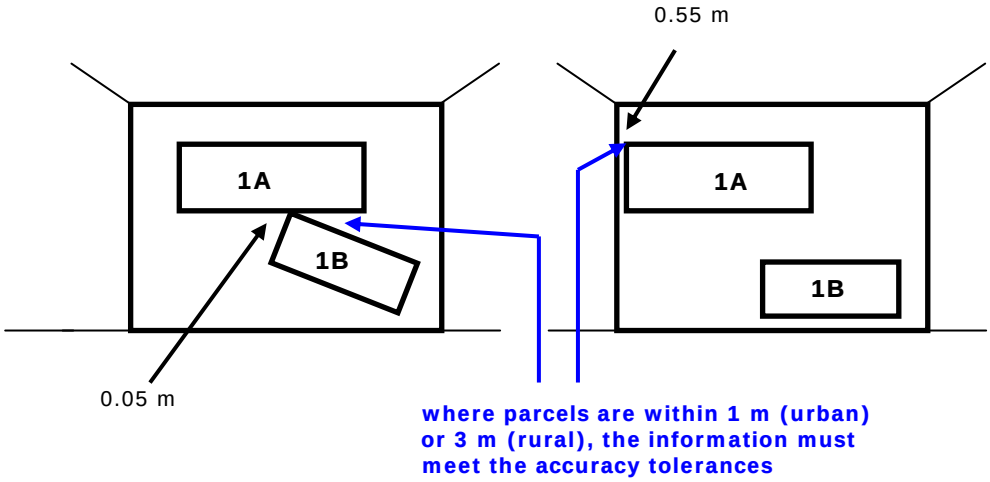

Figure 95: Where units and boundaries are close

[91] text changed to clarify interpretation of rules 9.6.4(b), 9.6.6(b), 9.6.15(a), 10.4.3(b) & 10.4.10(a)

Recording estate boundaries

127. Depiction of estate boundaries

Rules relating to estate boundaries

9.6.3 Parcel information

10.4.2 Parcel information

Examples of estate boundaries

- An estate boundary defines the extent of an interest in land. In the case of an estate registered under the LTA, the **estate boundary** will be the boundary commonly or previously referred to as the **CT boundary**. A gazette boundary is also often an estate boundary.
- An estate boundary will coincide with an existing primary parcel boundary.

Recording an estate boundary where it passes through land under survey

- A Diagram of Survey and Diagram of Parcels must depict an estate boundary where it passes through the land under survey, clearly annotated with the estate record references [r 9.6.3(h)(i)] and r 10.4.2(f)(i)].
- Where:
  - there is more than one title associated with the land under survey, the estate boundary will normally coincide with a disappearing boundary of a primary parcel being extinguished. It will appear to cut though the new parcels.
  - a water boundary has moved due to accretion, the estate boundary will normally coincide with the position of the old disappearing water boundary. The estate boundary will appear to cut through a new 'dry' primary parcel.

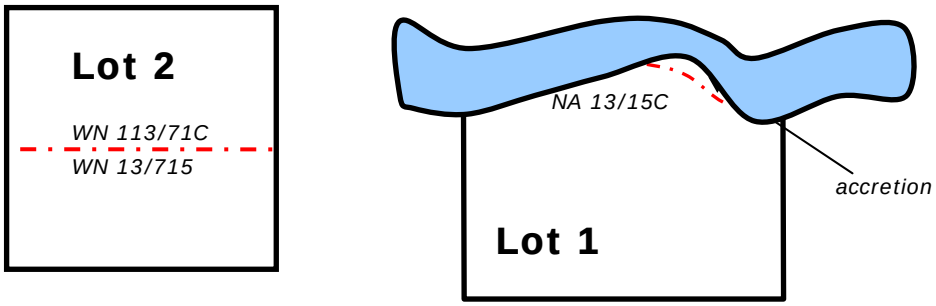

Figure 96: Estate boundaries passing through surveyed land

Recording boundary information and notations

128. Depiction of boundary information and notations

Rules relating to recording boundary information and notations

9.4 Boundary information

9.6.12 Boundary annotations

Recording class of survey in CSD plan

- A CSD Plan must include the accuracy class of each boundary [r 9.4(a)]. This also applies to all water, irregular, and permanent structure boundaries, whether new, adopted, or accepted.
- In the case of permanent structure boundaries where the information is depicted in a CSD as aspatial information (ie not captured digitally), the accuracy class could be recorded in the survey report.

Recording magnetic bearings or missing bearings or distances on Diagram of Survey

On a Diagram of Survey an accepted boundary must be annotated [r 9.6.12] as:

- 'bearing unknown' or 'distance unknown' when there is a missing bearing or distance,
- 'magnetic bearing' when the bearing is magnetic.

Recording parcels

129. Overview

Introduction to recording parcels in a CSD

The cadastre and land title records must record unambiguously the extent of each portion of land (ie the parcel) that relates to a particular interest.

This chapter explains the rules that relate to the depiction of parcels in a CSD.

Links to the recording of different parcels types in a CSD

This chapter contains the following sections:

Recording the extent and depiction of parcels

130. Recording extent and depiction of parcels

Rules relating to how a parcel must be depicted

9.6.3 Parcel information

10.4.2 Parcel information

Extent of parcel in CSD diagrams

- A Diagram of Survey focuses on the relationship between boundaries. It must depict the extent of all parcels [r 9.6.3(a)] and the relationships between parcels, boundaries, and boundary points [r 9.6.3(f)]. The full extent of an individual parcel is not required to be shown in its entirety.
- A Diagram of Parcels focuses on the relationship between parcels. It must depict the full extent of each parcel drawn to scale (ie drawn in proportion) in a single diagram [r 10.4.2(d)]. Multiple parcels may be shown in this single diagram. Diagrams, not necessarily to scale, may be used to depict detail.
- Additional diagrams may be necessary to ensure the relationships between parcels and the extent of each parcel is clear and unambiguous [r 9.6.15(a) and r 10.4.10(a)].

Parcel types required on a Diagram of Survey

A Diagram of Survey must depict the extent of all parcels, including all residue parcels, but need not include any balance parcel or balance non-primary parcel [r 9.6.3(a)]. The diagram will therefore include:

- new primary parcels created as a result of extinguishing an existing primary parcel (refer to Accounting for parcels above),
- new residue primary parcels, such as erosion parcels and parcels resulting from the removal of limitations as to parcels,
- existing non-primary parcels to be retained, and
- new non-primary parcels.

(refer to Recording parcels below for further information).

Recording primary parcels

131. Overview

Introduction to recording primary parcels in a CSD

Primary parcels are the foundation on which the cadastre and individual ownership rights are built. It is essential that their location and extent is recorded unambiguously in the cadastre and on land title records.

This section explains the rules that relate to the depiction of primary parcels in a CSD.

Links relating to the recording of primary parcels in a CSD

This section contains the following topics:

132. Recording general land parcels

[Guidance material to be developed when required]

133. Recording Māori land parcels

Rules relating to the recording of Māori land parcels

9.6.3 Parcel information

10.4.2 Parcel information

Recording Māori Land appellation on the CSD diagrams

A Diagram of Survey and Diagram of Parcels must include the appellation of each new parcel [r 9.6.3(d) and r 10.4.2(d)(ii)]. The appellation may be abbreviated providing it is unique. An example is 'Tumu A7 ML 417582' depicted on the diagram as 'Tumu A7'.

134. Recording balance primary parcels

Rules relating to recording balance primary parcels	9.6.3 Parcel information 10.4.2 Parcel information
Depiction of balance primary parcel not required on CSD diagrams	A Diagram of Survey and Diagram of Parcels are not required to depict a balance parcel [r 9.6.3(a) and r 10.4.2(a)] although the parcel is required to be included in the CSD (refer to Balance primary parcel above).
Dimensions not required on CSD diagrams if balance primary parcel is depicted	If a surveyor chooses to depict a balance primary parcel on either a Diagram of Survey or Diagram of Parcels, the boundary vectors for those accepted boundaries not common with a new parcel are not required to be depicted [r 9.6.14(b)(iii) and r 10.4.9(a)(iii)].

135. Recording residue parcels

Rules relating to recording residue parcels

9.6.3 Parcel information

10.4.2 Parcel information

Residue parcel to be depicted on CSD diagrams

A Diagram of Survey and Diagram of Parcels must depict the extent of all residue parcels [r 9.6.3(a) and r 10.4.2(a)] (refer to Residue parcel above). One type of residue parcel can result where the head title is limited as to parcels and the limitation is being uplifted with part of the documentary title being unclaimed, as shown below.

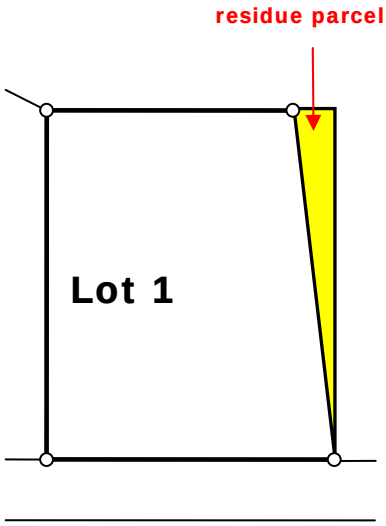

Figure 97: Example of a residue parcel

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Boundary dimensions not required on CSD diagrams for accepted boundaries of residue parcel

The boundary vectors for accepted boundaries not common with a new parcel are not required to be depicted [r 9.6.14(b)(iii) and r 10.4.9(a)(iii)].

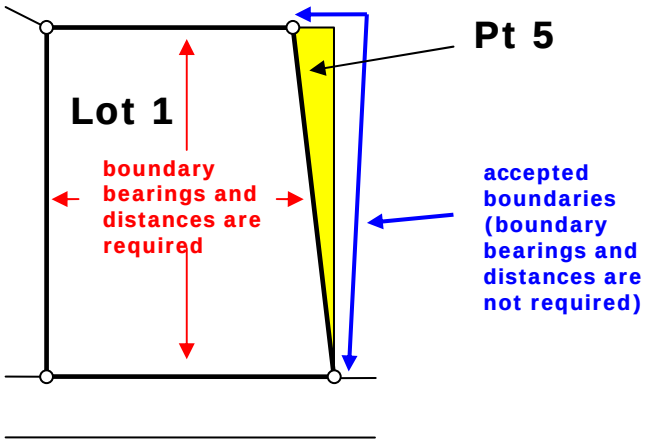

Figure 98: Accepted boundaries on a residue parcel

Appellation of residue parcel required on CSD diagrams

- A Diagram of Survey and Diagram of Parcels must include the appellation of each residue parcel where an appellation is required by rule 5.5.1(b)(iii) [r 9.6.3(d) and r 10.4.2(d)(ii)].
- In specified cases where the existing appellation must have the prefix 'Part' [r 5.5.1(b)(iii)], it may be abbreviated providing it is unique. An example is 'Part Lot 5 DP 746' depicted in Figure 98 as 'Pt 5'.

136. Recording road, rail, and water body names and decriptions

Rules relating to recording names of road, rail and water bodies

9.6.3 Parcel information

10.4.2 Parcel information

Name of road, railway, water body to be depicted in CSD diagrams

- A Diagram of Survey and Diagram of Parcels must depict the name of any road, railway, or water body where it abuts a new parcel. Examples are 'Lawford Road', 'NIMT Railway', and 'Whanganui River'.
- If no name is available for the road, railway, or water body, then a description must be used [r 9.6.3(h)(iv) and r 10.4.2(f)(iv)]. Examples include **river**, **stream**, **lake**, **railway**, and **road**.

Recording non-primary parcels

137. Overview

Introduction to recording non-primary parcels in a CSD

To enable right holders to exercise their rights, it is essential that the location and extent of a non-primary parcel in relation to its underlying parcel is recorded unambiguously in the cadastre and in land title records.

This section explains the rules that relate to the recording of non-primary parcels in a CSD.

Links relating to the recording of non-primary parcels including easements, covenants, units marginal and esplanade strips in a CSD

This section contains the following topics:

138. Recording the spatial relationship between non-primary parcels

Rules relating to recording the relationship between non-primary parcels

9.6.3 Parcel information

9.6.15 Interpretation of information on a Diagram of Survey

10.4.2 Parcel information

10.4.10 Interpretation of information on a Diagram of Parcels

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Recording the spatial relationship between non-primary parcels, continued

Relationship between non-primary parcels with other parcels on the CSD diagrams

- A Diagram of Survey focuses on the relationship between the **boundaries.** While a depiction of each parcel in its entirety is not required on the diagram, the diagram must include**:**

  - a clear depiction of the spatial relationship between each non-primary parcel **boundary** and the **boundary** of the underlying parcel [r 9.6.3(g)(ii) and r 9.6.15(a)], and

  - sufficient boundaries of the non-primary parcel in relation to the primary parcel to ensure the relationship is clear and unambiguous. The inclusion of part-boundary distances is one acceptable way to show this.

- A Diagram of Parcels focuses on the relationship between the parcels. The diagram must include a clear depiction of the spatial relationship between each non-primary **parcel** and the underlying **parcel** [r 10.4.2(e)(i) and r 10.4.10(a)].

  This rule ensures that there is a known relationship between the parcels and there is a clear understanding of the location of the non-primary parcel in relation to the overall underlying parcel.

- Note there are particular requirements for movable marginal strips (refer to Depiction requirements for marginal and esplanade strips below) and unit developments (refer to Depicting the relationship of units and cross lease areas to primary parcel boundaries in the CSD diagrams below).

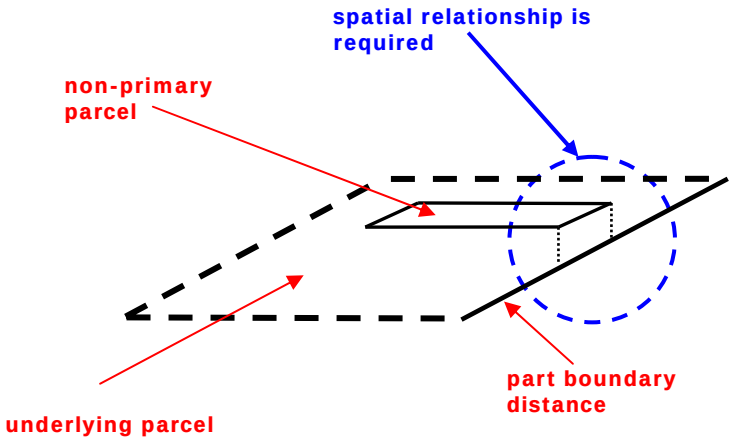

Figure 99: Spatial depiction of a non-primary diagram

139. Recording easement parcels

Rules relating to the recording of easements in a CSD

9.6.3 Parcel information

10.4.2 Parcel information

Recording in the CSD existing easements represented by centrelines with a known width

On a Diagram of Survey and Diagram of Parcels, an existing centreline easement of a known width that is:

- affected by the creation of new underlying parcel boundaries, is required to be depicted as a polygon parcel [r 9.6.3(b) and r 10.4.2(b)],
- not affected by the creation of new underlying boundaries is able to retain its representation as a centreline [r 9.6.3(c) and r 10.4.2(c)].

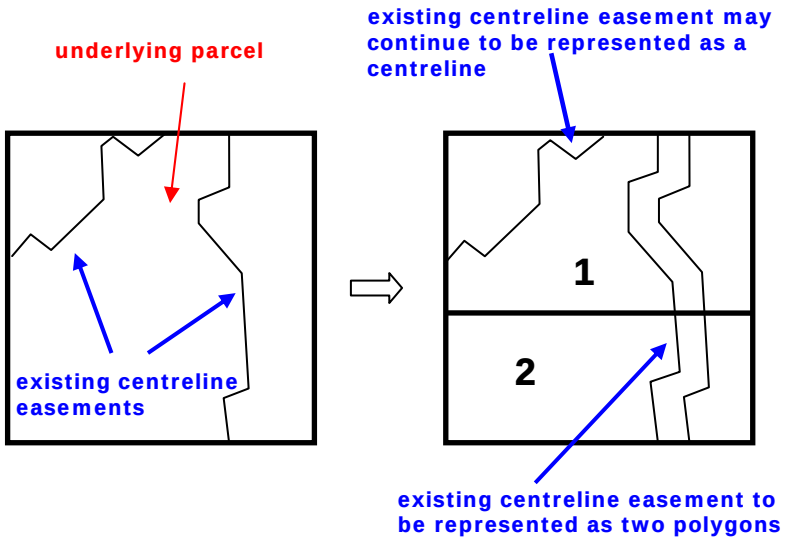

Figure 100:Centreline easements

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Recording easement parcels, continued

Recording in the CSD existing easement represented by a centreline without a known width

- On a Diagram of Survey and Diagram of Parcels, an existing centreline easement without a known width retains its depiction as a centreline. The centreline must be annotated 'width unknown' [r 9.6.3(c), r 9.6.11, r 10.4.2(c), and r 10.4.8].
- The schedule of existing easements must include information about this existing easement [r 10.2.2].

Recording in the CSD easements on a unit title development[92]

- Existing easements which are:
  - both subject and appurtenant, are to be recorded in a schedule [r 10.2.2]
  - subject easements, are to be depicted spatially in the Diagram of Survey and Diagram of Parcels [r 9.6.4 and r 10.4.3].
- New easements:
  - are to be recorded in a schedule or, in the case of new easements required by a territorial authority, recorded in a memorandum [r 10.2.1]
  - which are both subject and appurtenant, are to be depicted spatially in the Diagram of Survey and Diagram of Parcels [r 9.6.4 and r 10.4.3].
- Separate easement parcels are required where an easement crosses over different units.

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[92] text changed to clarify interpretation of rules 9.6.4, 10.2 & 10.4.

Recording easement parcels, continued

New easement over the whole underlying parcel[93]

- Where an easement or covenant is over the whole of the underlying parcel (irrespective of whether the underlying parcel is an existing parcel or new parcel), it is necessary to create a new non-primary parcel which coincides with the underlying parcel boundaries [r 9.6.3(a) and r 10.4.2(a)].

  In many cases, it will also be necessary to depict the non-primary parcel in a separate diagram to ensure the extent of the parcel is unambigious [r 9.6.15 and r 10.4.10] .

- Note, the non-primary parcel must have its own unique appellation in terms of rule 5.5.

[93] text changed to clarify interpretation of rule 5.5

140. Recording covenant parcels

Rules relating to recording covenants in a CSD

9.6.3 Parcel information

10.3 Covenant information

10.4.2 Parcel information

LINZ65308: Interim ruling on survey requirements for open space covenants

Recording covenant areas in a CSD

- The recording of new covenants other than QEII covenants must be treated in the same manner as for all other non-primary parcels.
- For new QEII open space covenants using the class D provisions created under *LINZR65308: Interim ruling on survey requirements for open space covenant,* the following requirements apply:
  - All class D vectors must be annotated 'not defined by survey' on the Diagram of Survey and the Diagram of Parcels.
  - On the Diagram of Survey, all existing old cadastral and NZGD49 boundary vectors that have been adopted as being in terms of geodetic datum must be annotated 'not defined by survey'.
  - The Title Plan must include a notation referring to the covenant parcel identifier and the parcel intent [r 10.3].
- For new QEII open space covenants using the class C provisions created under *LINZR65308: Interim ruling on survey requirements for open space covenant,* the normal non-primary parcel requirements apply[94].
- Note that a non-primary parcel that defines a height covenant may have an upper limit defined by a stratum boundary and is subject to witnessing and other requirements (refer to Stratum boundaries above).

(refer also to Accuracy standards for new class C and D QEII open space covenant boundaries above)

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[94] text changed to clarify interpretation of *LINZR65308: Interim ruling on survey requirements for open space covenant*

Recording existing QEII covenant areas in a CSD

- An existing QEII covenant that has been recorded in a document but has not been previously defined in a CSD (eg is photo based), is not required to be defined in the new CSD.

  In this case, the Title Plan must include a notation referring to the covenant parcel identifier (as recorded in the document), the parcel intent, and the creating document reference [r 10.3]. In most cases, the simplest way would be to annotate the Diagram of Parcels.

- Where an existing parcel is being subdivided and there is doubt as to which new primary parcels are affected by the existing covenant area, the RGL will memorialise not only the clearly affected titles but also any title possibly affected. It would be helpful, but not essential, to include in the survey report a diagram depicting the affected primary parcels.

Recording existing class D QEII covenant boundaries in a CSD

- A QEII covenant area that has been spatially recorded in an approved and deposited CSD must be in turn be recorded as a non-primary parcel in relationship to its underlying parcel in the new CSD [r 9.6.3(g) and r 10.4.2(e)].

- The Title Plan must include a notation referring to the covenant parcel identifier, the parcel intent, and the creating document reference [r 10.3].

- Unless re-surveyed, class D boundary vectors created under *LINZR65308: Interim ruling on survey requirements for open space covenants* must be annotated 'not defined by survey' on both the Diagram of Survey and the Diagram of Parcels (refer also to Accuracy standards for new class C and D QEII open space covenant boundaries above)[95].

[95] text changed to clarify interpretation of *LINZR65308: Interim ruling on survey requirements for open space covenant*

141. Recording movable marginal strip and esplanade strip parcels

Rules relating to the recording of marginal and esplanade strips

5.3 Parcel areas

9.6.6 Parcel information for a movable marginal strip

9.6.8 Irregular boundaries

10.4.4 Parcel information for a movable marginal strip

10.4.6 Irregular boundaries

Historic depiction of marginal and esplanade strips

Historically, neither movable marginal strips nor esplanade strips were depicted as parcels but their location and extent was indicated by notation against the water boundary in the CSD diagrams.

Requirement to include movable marginal strips[96]

The government (by direction in 2007) requires that all Crown agencies that dispose of Crown land require the marginal strips to be included as part of the survey and be included in the resultant CSD.

Marginal strip definition requirements[97]

Where a marginal strip is to be depicted, the following applies:

- A marginal strip must be depicted 20 metres wide from an underlying primary parcel water boundary.

  If the boundary is an adopted water boundary that does not coincide with the present position of the water body, the marginal strip must be depicted 20 metres wide from that adopted water boundary.

- In other cases the marginal strip must be depicted covering that part of the primary parcel that lies within 20 metres from the relevant water body. In some cases, the marginal strip may be wholly or partly within the underlying primary parcel.

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[96] text changed to clarify application of 9.6.3(a) & 10.4.2(a)

[97] text changed to clarify application of legislation

Recording movable marginal strip and esplanade strip parcels, continued

Esplanade strip definition requirements[98]

The Resource Management Act 1991 provides for an esplanade strip:

- of a specified width. An esplanade strip cannot vary in width or taper although it may have different specified widths along its length. A survey point must be defined where a specified width changes.
- created from the underlying parcel. An esplanade strip cannot be set off from a water body that is separated from the underlying parcel.
- that follows along the edge of a water body and moves with that water body. The landward boundary of a strip must not be a right line boundary. It must be an irregular boundary [r 6.6(c)].

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[98] text changed to clarify application of legislation

Depiction requirements for marginal and esplanade strips

- Marginal strips and esplanade strips must now be depicted as non-primary parcels (refer to Non-primary parcel above).
- On a Diagram of Survey and Diagram of Parcels:
  - the strip parcel must be contained within its underlying parcel [r 9.6.6 and r 10.4.4],
  - the landward boundary of the strip parcel must be an irregular boundary [r 6.6(c)] and be at a scale that shows its true shape and location [r 9.6.8(a) and r 10.4.6], and
  - the width of the strip must be depicted [r 9.6.14(a)(iii) and r 10.4.9(b)].
- On a Diagram of Survey only, the landward irregular boundary of the strip must be also be at a scale that is adequate to meet accuracy requirements (refer to Accuracy of water boundaries and irregular boundaries above).

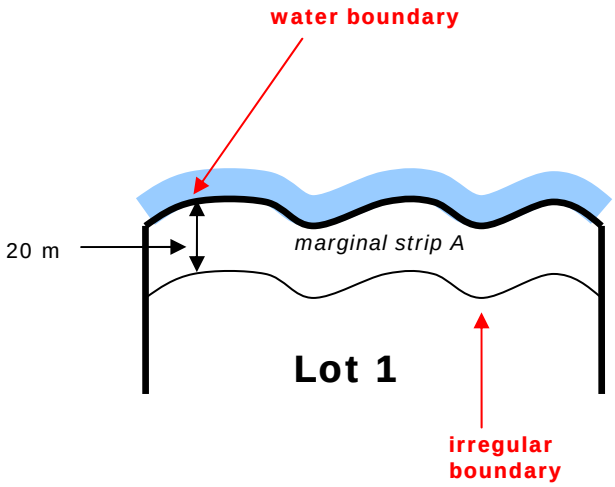

Figure 101 Depiction of a marginal strip

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Recording movable marginal strip and esplanade strip parcels, continued

Pt 4A marginal strip notation required on the CSD diagrams

- Rules 9.6.11 and 10.4.8 specify when the notation 'Subject to Part 4A Conservation Act 1987' must be depicted on a Diagram of Survey and Diagram of Parcels. This requirement applies regardless of whether there is a water body present.
- Surveyors are responsible for determining whether previous disposals are subject to Part 4A of the Conservation Act 1987. Existing CSDs lodged on or after 10 April 1990 may have had the notation omitted incorrectly.

Appellation of marginal or esplanade strip on CSD diagrams

The appellation of the strip must be depicted on a Diagram of Survey and Diagram of Parcels [r 9.6.3(d)(ii) and r 10.4.2(d)] either as **esplanade strip** or **marginal strip** [r 5.5.2] with a unique letter(s) [r 5.5.4]. Examples are 'marginal strip A' and 'esplanade strip B'. This appellation may be abbreviated on the diagram providing it is unique to the dataset (eg 'A' or 'B').

Area of marginal strip on Diagram of Parcels

- The area of the primary parcel must include the area of the marginal strip that lies within it [r 5.3(a)(i)]. This is a consequence of the legislation which required the parcel area to be as if the marginal strip did not exist.
- If the CSD includes a separate area for a marginal strip in addition to the area of the underlying primary parcel, it must not be shown on the Diagram of Parcels [r 10.4.2(d)(iv)]. This is to ensure that anyone looking at the title diagram would not be misled into thinking that the area of the underlying primary parcel is the sum of the two areas shown on the Diagram of Parcels.

142. Recording balance non-primary parcels

Rules relating to recording balance non-primaery parcels in a CSD

9.6.3 Parcel information

10.4.2 Parcel information

No depiction of balance non-primary parcel

- In the rare case where the purpose of a CSD is to show the portion of an existing easement that is to be surrendered (refer to Balance non-primary parcel above), the Diagram of Survey and the Diagram of Parcels must depict a non-primary parcel that represents the portion of the existing parcel to be surrendered [r 9.6.3(a) and rule 10.4.2(a)]. This is because the legal action taken will be a cancellation of the right associated with the depicted parcel.

- The balance non-primary parcel is not required to be depicted because it represents the portion of the right to be retained. If however the surveyor chooses to depict it, its presence must also be recorded in the schedule of existing easements.

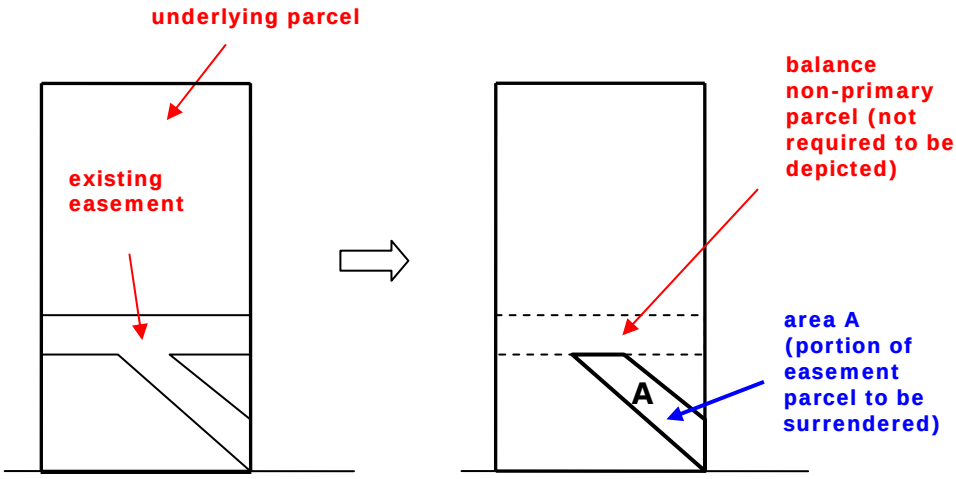

Figure 102: Portion of an easement to be surrendered