REGULATORY IMPACT STATEMENT

Canterbury Property Boundaries Project

Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by Land Information New Zealand (LINZ). It provides an analysis of options on undertaking cadastral surveys in greater Christchurch in a way that accounts for the earthquake-induced land movement.

The two problems created by the status quo within the scope of this work are:

- In some areas of greater Christchurch most affected by land movement, accepted survey practices are not sufficient to provide certainty.
- Accepted survey practices can result in different weighting placed on evidence, which can lead to different results.

This analysis covers the full range of feasible options that are available to address the above problems, and options for consequential issues under the preferred approach:

- Defining the area over which the preferred approach applies.
- Provision of guidance or advice to support interpretation of the preferred approach.
- Providing certainty to landowners about their legal boundaries.
- Addressing legacy survey issues.

The analysis of the costs and benefits of the options draws on analysis of cadastral and geotechnical data to identify the number of properties affected, and analysis of cadastral surveys completed since 2010. This is coupled with estimates of the costs of survey activity. Direct engagement with stakeholders has enabled qualitative assessment of the performance of options against the primary objectives of supporting the Canterbury rebuild and ensuring landowner rights are maintained.

This analysis provides the basis for changes to primary legislation that enables changes to the Cadastral Survey Rules 2010 (Rules) to be made that operationalise the change. Development of the Rules and any associated guidance is subject to a parallel process under the Cadastral Survey Act 2002.

Implementing some of the policy options identified will impose additional operational costs on LINZ. It is anticipated that these costs can be met from within existing baseline funding. Any case for additional funding to implement the preferred option would be considered as a separate process.

Signed electronically by: Cindy O'Brien, Manager Policy, Location System Group

Date: 13/8/2015

Executive summary

- Earthquakes in 2010 and 2011 caused land movement over large areas of greater Christchurch. Most of the movement was less than 10 centimetres, and therefore within prescribed survey tolerances, but was much greater in some areas, especially the eastern suburbs of Christchurch.
- Movement was usually towards waterways and relatively consistent across residential blocks and suburbs. In some cases movement resulted in land being stretched. In an estimated 200 cases, land parcels were compressed and reduced in size beyond normally accepted survey tolerances.
- In the worst affected areas, it has proven difficult for surveyors to locate legal property boundaries. This is because the measurements between survey pegs and marks in the ground may no longer match those recorded on the official survey plans. In these cases, it is difficult for surveyors to reconcile physical evidence of boundaries, all of which moved with land movement, with the generally accepted survey principle that legal property boundaries are fixed in space except in the case of gradual and imperceptible movement.
- Identifying property boundaries through a cadastral survey is often a first step in determining where to place a building. An urgent solution is therefore central to maintaining momentum of the Canterbury rebuild. Any solution must also ensure landowner property title rights are retained.
- The preferred option is to introduce legislation that clarifies the legal basis on which cadastral surveys should locate legal boundaries in circumstances of land movement that resulted from the Canterbury earthquake sequence. This would apply to land within greater Christchurch and be supported by changes to the Rules and, if necessary, associated guidance issued by the Surveyor-General.
- This option provides the best performance against the objectives of landowner rights, supporting rebuild activity and timeliness. It preserves the relationship between occupation (as defined by physical evidence) and the legal boundary and minimises the scope for delay in rebuild activities.

7 Eased Unit

s9(2)(ba)(i), s9(2)(g)(i)

8 Engagement with the survey profession, insurers (including the Earthquake Commission), the Property Law section of the New Zealand Law Society, Christchurch City Council, the Department of the Prime Minister and Cabinet, and the Canterbury Earthquake Recovery Authority has occurred throughout the policy development process. This has involved

developing and testing the nature of the problem, objectives, and proposed solution. Stakeholders are supportive of the proposed package of solutions as it best meets landowners' expectations and creates far fewer practical problems than the alternatives.

Status quo and problem definition

- Survey plans record the boundaries of a property where one property ends and another begins. A deposited survey plan or dataset is the foundation that legal title to a property is based on. The survey and land title system underpins the many land transactions occurring every day. New Zealanders enjoy many benefits from this certainty, such as the use of land as security for bank loans.
- 10 Knowing the location of the legal boundary is important for property and building related transactions. The position of legal boundaries is also important for public land administration and electoral boundary definition. Often the location of a boundary can be established through reference to the title deed or property information made available by LINZ. Confirming the location of the boundary through a cadastral survey is required for any subdivision, and sometimes for resource and building consents. A survey is not usually required for a routine property sale or improvement.
- Only licensed cadastral surveyors can carry out surveys and they are liable for the accuracy of those surveys. The Surveyor-General sets rules, standards, and guidelines that professional surveyors must follow, and audits the work of surveyors. The Chief Executive of LINZ is responsible for ensuring the datasets comply with rules and standards, and integrates them into the official record.



s9(2)(h), s9(2)(g)(i), s9(2)(ba)(i)

Excluding Red Zone properties that the Crown owns, LINZ estimates that around 11,000 properties in Christchurch experienced land movement of over 20 centimetres. These properties are concentrated in the eastern suburbs, particularly New Brighton, but there are pockets of such properties across Christchurch, e.g. in the Port Hills and Sumner. Table 1 summarises how many properties were affected and the degree to which they were affected. Appendix 1 pictorially represents the degree of movement across Christchurch.

Table 1: Christchurch properties affected by land movement

Degree of movement	Number of properties
0-20cm	124,079
20-50cm	10,048
More than 50cm	1,090
Total	135,217

- 14 The uncertainty in the common law approach to establishing legal boundaries in cases of earthquake-related land movement has made it challenging for surveyors operating in greater Christchurch. Central to this uncertainty is whether legal boundaries move in line with land movement, or remain fixed in space.
- 15 The two problems created by the status quo within the scope of this work are:
 - In some areas of greater Christchurch most affected by land movement, accepted survey practices are not sufficient to provide certainty on how to locate legal boundaries.
 - Accepted survey practices can result in surveyors placing different weighting on



s9(2)(h), s9(2)(g)(i), s9(2)(ba)(i)

17

- 18 In the meantime, the status quo creates:
 - a Uncertainty and cost for landowners. Some surveys are already taking up to three times as long to produce and approve.
 - b Need for surveyors to apply judgements that can lead to inconsistent or conflicting boundary determinations.

s9(2)(g)(i), s9(2)(ba)(i)

- c Lack of clarity about whether spatial information provided by LINZ is an accurate representation of legal title.
- d Increased likelihood of boundary disputes.
- An urgent solution to the problems identified is needed as identifying property boundaries is often a first step in determining where to place a building, and is therefore central to the Canterbury rebuild. Survey work is continuing, although it is slower in some areas and some surveyors are reluctant to take on work in these areas.

s9(2)(g)(i), s9(2)(ba)(i)

In March 2015, Cabinet noted the issue and that legislative intervention or additional funding might be required to address the impacts on properties most severely affected by land movement in greater Christchurch. Cabinet invited the Minister for Land Information to report back on progress, and on any further actions that may be required to manage the impacts on landowners and affected parties [EGI Min (15) 7/4].

Objectives

The primary and secondary objectives against which options are assessed are set out in the table below. Maintaining landowner rights and supporting the rebuild are the most important objectives – options that perform best against these objectives are preferred.

Table 3: Objectives for Canterbury Property Boundaries project in decreasing priority order

Primary objectives	Description	
Landowner rights	Are the rights of landowners to undisturbed possession maintained? Are additional costs and delays in property transactions minimised?	
Support rebuild activity	Does the solution provide confidence to all parties in survey practices, and any associated legal and planning processes, to continue rebuild activities?	
Timeliness	Can the solution be implemented quickly?	

Certainty	Are the Rules, practices and legal position associated with surveying areas subject to land movement clear and without unintended consequences?	
Accuracy	Does publicly available information on boundaries adequately reflect legal title to support efficient property transactions and improvements? Description	
Secondary objectives		
Cost to government	The solution must acknowledge the costs to government, such as additional LINZ processime, effort required to amend the Rules and/or legislation, release of public land, and compensation to landowners.	
	compensation to landowners.	

- These objectives were developed and refined in consultation with key stakeholders. Some quantification of the costs of each option against objectives has been possible through:
 - a Analysis of cadastral and geotechnical data to identify the number of properties affected.
 - b Analysis of cadastral surveys completed since 2010.
 - c Estimating the impact of options on the costs and extent of surveying activity created.

s9(2)(g)(i), s9(2)(ba)(i)

Performance against some objectives is measured as a binary choice (e.g. landowner rights), or a judgement call (e.g. certainty).

Options and impact analysis

- 24 The primary issue this Regulatory Impact Analysis considers is how to undertake cadastral surveys in greater Christchurch in a way that accounts for the earthquake-induced land movement.
- A number of second-order considerations with regulatory implications stem from the primary issue. These address consequential issues under the preferred approach, or complement the preferred approach by improving performance against objectives. These are:
 - a Defining the area over which the preferred approach applies.
 - b Provision of guidance or advice to support interpretation of the preferred approach to cadastral surveying.
 - c Providing certainty to landowners about their legal boundaries.
 - d Addressing legacy survey issues.

Cadastral surveying in greater Christchurch

The Rules are issued by the Surveyor-General under section 49 of the Cadastral Survey Act 2002. Cadastral surveyors must comply with these Rules when carrying out a cadastral survey and lodging a cadastral survey dataset with LINZ.

27 Rule 6.1 sets out the primary duty of a surveyor:

6 Boundaries

6.1 Duty of surveyor when defining a boundary by survey

When defining a boundary by survey, a cadastral surveyor must:

- gather all evidence relevant to the definition of the boundary and its boundary points,
- (b) interpret that evidence in accordance with all relevant enactments and rules of
- (c) use that evidence to determine the correct position of the boundary and boundary points in relation to other boundaries and boundary points.
- 28 'Evidence' generally takes the form of boundary pegs, survey marks, and other physical evidence of occupation such as fences and structures.

s9(2)(h), -s9(2)(g)(i), s9(2)(ba)(i)

In some areas of greater Christchurch (particularly in Christchurch's eastern suburbs) the earthquakes caused significant land movement.

s9(2)(h), s9(2)(g)(i), s9(2)(ba)(i)

Option 1: Status quo

30 Surveyors will continue to be expected to interpret evidence in line with the existing Rule 6.1. Case law will emerge over time to establish whether boundaries did, or did not, move with the land as a result of the earthquakes.

Option 2: Boundaries moved with the land (preferred)

- Legislation would be introduced to provide that boundaries moved with the land as a result of the Canterbury earthquake sequence. Changes would be made to primary legislation and the Rules issued by the Surveyor-General legislation would be required to provide surveyors with the necessary certainty about the approach to take.
- For the most part, landowners will be unaware of and unaffected under this scenario the movement will either be consistent across the property, or unnoticeably distorted.
- 33 The majority of surveys completed since the earthquakes have applied this approach.

Option 3: Boundaries have not moved

- Legislation would be introduced to provide that boundaries did not move with the land as a result of the Canterbury earthquake sequence.
- Under this scenario, boundaries would remain in their pre-earthquake position in space, regardless of the new position of any physical evidence (such as buildings or survey pegs).
- 36 Surveys completed since 2010 have not generally applied this approach.

Table 4: Options analysis: Surveying earthquake-affected parts of greater Christchurch

	, , , , ,		
Option	Benefits	Costs	
Status quo		Lack of clarity about survey approach means increased cost for landowners.	_
		Surveyors take a risk adverse position that inhibits survey activity with adverse effect on rebuild activity. Some will not be prepared to survey worst-affected areas.	
		9	s9(2)(g)(i), s9(2)(ba)(i)
		Lack of clarity on location of legal boundaries will inhibit property-related transactions and improvements.	
		property-related transactions and improvements.	s9(2)(g)(i), s9(2)(ba)(i)
Boundaries moved with	This is how most surveys have been conducted since 2010 and requires less effort to implement.	May redefine the size (mostly by less than 1%) and shape of properties in affected areas.	55 (=) (55.) (7
the land (preferred)	Provides least disruption for landowners and building owners as boundaries will best align with physical evidence and occupation.	The spatial representation of boundaries in LINZ's database will not align with the position of legal boundaries.	
	Fewer potential breaches of area-based planning controls.	OL	
			s9(2)(g)(i),
Boundaries	The size and shape of properties is unchanged.	Most surveys completed since 2010 will be	s9(2)(ba)(i)
have not moved with the land	There is little scope for surveyor judgement, which will limit costs.	inconsistent with this approach and will lead to a large number of boundary disputes.	
	The spatial representation of boundaries in LINZ's database will align with the position of legal boundaries (but differ from occupation).	Physical occupation will be outside legal boundaries for a large number of properties which will mean assets that fall outside the legal boundary probably cannot be insured or financed.	

A large number of boundary adjustments to realign

Some structures may need to be relocated.

with occupation will be triggered.

Analysis

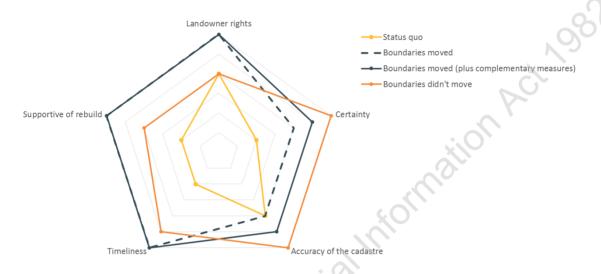
- Option 2 is preferred new legislation to provide that boundaries moved with the land as a result of the Canterbury earthquake sequence. This option performs best overall against the objectives, and provides the best performance against the objectives of landowner rights, supporting rebuild activity and timeliness. The preferred option preserves the relationship between occupation (as defined by physical evidence) and the legal boundary and therefore minimises the scope for delay in relation to rebuild activities. It also has the least impact for other uses of property boundary information. Total estimated cost to the Crown and landowners are lowest for option 2.
- Between October 2010 and April 2015, 4,300 surveys have been completed in greater Christchurch, and lodged with LINZ. LINZ has analysed a subset of these to determine the survey approach applied, and the level of consistency with the proposed approach. This analysis shows the preferred approach aligns with that used for the vast bulk of surveys (over 90%) completed.

(over 90%) completed.

\$9(2)(g)(i), \$9(2)(ba)(i)

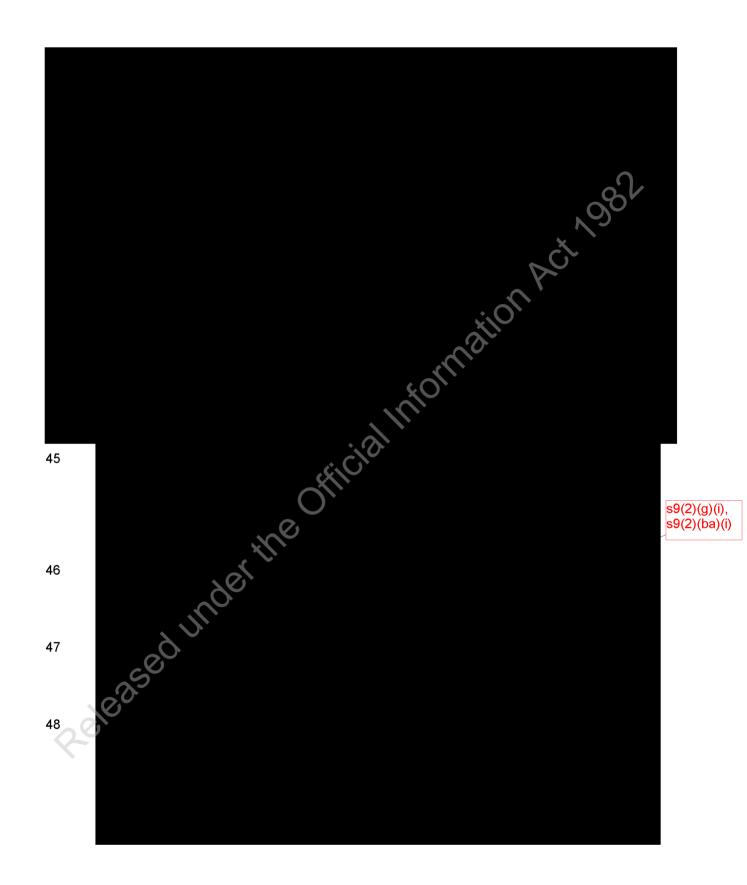
The figure below shows how the options perform against the objectives, including the impact of these complementary measures. A number of complementary interventions (described below) are proposed to further improve the performance of the preferred option against objectives relating to certainty and accuracy.

Figure 1: Options analysis: Surveying earthquake-affected parts of greater Christchurch



- For the surveys that have been completed using a different approach, LINZ will identify and actively manage these to reduce the likelihood of potential future boundary conflicts.
 - s9(2)(g)(i), s9(2)(ba)(i)
- In cases of material loss arising from this active management, or if landowners do not agree to changes to boundaries, property owners will continue to have access to the Courts to resolve disputes and gain redress, where appropriate.
- Each option has also been assessed based on estimates of the costs associated with:
 - a s9(2)(g)(i), s9(2)(ba)(i)
 b surveys.
 - c boundary adjustments.

s9(2)(g)(i), s9(2)(ba)(i)





Survey activity

- 50 Significantly more cadastral surveying will be required under option 3 ('boundaries didn't move') as physical evidence will no longer provide an accurate representation of the location of a legal boundary. This will hold up some rebuild activities.
- 51 A regulatory response that clarifies the survey approach that should be taken in greater Christchurch will bring average survey costs back into line with national averages. The flexibility involved in the preferred option is expected to result in the average cost of a survey and Building Location Certificate under the preferred option being higher than for option 3, but this is outweighed by the much lower rate of surveying required.

Boundary adjustments

52 Significantly more boundary adjustments will be required under option 3 as legal boundaries will misalign with occupation, creating a large number of encroachments and limitations on



Defining the area over which the preferred approach applies

- The proposed approach is designed to provide an appropriate solution to cadastral surveying in greater Christchurch, in recognition of the land movement caused by the earthquakes.
- The objectives of 'landowners rights' and 'certainty' are of particular relevance to defining the area over which the preferred approach applies. In practice, this involves a balance between providing for an appropriate solution for all properties that have experienced movement for which the status quo is not suitable, avoiding undue concern across a large number of properties and unintended consequences for properties outside greater Christchurch.

Option 1: General application (do nothing)

- This will result in the law and Rule change applying to any survey conducted in New Zealand and require surveyors to determine whether a given property is subject to earthquake-induced land movement, and interpret evidence in line with the law and Rules.
- In a practical sense this should not affect surveys outside greater Christchurch, although it is possible that a surveyor could argue for broader application in some situations.

Option 2: Ring-fence around worst-affected area

- The intent of this approach would be to capture all of the properties for which the change in survey approach needs to apply.
- Application of this approach will require detailed geotechnical and survey accurate data from pre- and post-earthquake in order to confidently establish the boundary as well as pockets of land outside the ring-fenced area. This will be difficult and expensive to achieve, so it is likely that the area would need to be relatively large and complex to capture all affected properties.
- There may be some awkward areas where different survey approaches must be applied to properties within the same area (ie on either side of a ring-fenced area), even where the nature of land movement appears identical.

Option 3: Applies to all of greater Christchurch (preferred)

- This will require surveyors to determine whether a given property within greater Christchurch is subject to material earthquake-induced land movement, and interpret evidence in line with the law and Rules.
- In a practical sense, this will mean no difference for properties within the area that are not subject to material land movement (where the usual approach would apply).

Table 5: Options analysis: Defining the area over which the preferred approach applies

Applicable area	Benefits	Costs
General application	Allows surveyors to determine most appropriate approach based on conditions encountered on the ground.	Provides scope for application outside greater Christchurch, which could create some uncertainty.
Ring-fence around worst-affected area	Surveys within ring-fence slightly cheaper as default position will be that the new Rule applies.	Will result in pockets outside the ring-fence where the current approach creates problems for landowners that need to be resolved through costly boundary readjustments or structure relocation.

Applicable area	Benefits	Costs
Applies to all of greater Christchurch (preferred)	Allows surveyors to determine most appropriate approach based on conditions encountered on the ground.	Cost of surveys slightly higher due to need for surveyor judgement on whether the new Rule should be applied.
	Limits applicability to area where land movement caused by the Canterbury earthquakes is known to have occurred.	

Analysis

- It is proposed that the solution apply to greater Christchurch, defined as the districts of the Christchurch City Council, the Selwyn District Council, and the Waimakariri District Council, and includes the coastal marine area adjacent to these districts.
- Surveyors are equipped to isolate earthquake-induced movement, and LINZ will assist with some additional information on the nature of earthquake-induced movement in greater Christchurch (described from paragraph 68 below).
- Any geographical boundary must be definable using a clear and justifiable basis. Data on land movement is not dense enough to allow LINZ to confidently define a tight geographical ring-fence. A decision to do so would more likely result in pockets of properties outside of the ring-fenced area affected by shallow ground movement that will continue to be problematic.
- A tight ring-fence is likely to result in a higher than necessary rate of cadastral surveying within the area due to the perception of boundary problems. This would add costs to property transaction, improvements, and rebuilds in the area.
- To minimise potential uncertainty about the location of legal boundaries over the area, and consequential increase in survey activity, a number of complementary measures are proposed (discussed from paragraph 76 below).

Supporting interpretation of the preferred approach

- The proposed approach relies on surveyor judgement to interpret physical evidence in line with the revised Rule.
- In practice, this will involve a surveyor determining whether land has been subject to land movement, and where the movement was caused by the Canterbury earthquakes versus other phenomena (eg gradual erosion and slips). The Rules will clearly articulate the circumstances in which the new approach should be applied, and where existing common law remains appropriate.
- Surveyors are generally equipped to isolate earthquake-induced movement, but the approach involves some scope for surveyor judgement and interpretation of evidence that may lead to inconsistent or conflicting boundary determinations, which increases cost to landowners.

- 71 LINZ will assist surveyors through a range of non-regulatory measures aimed at limiting the cost and degree of judgement required when surveying within affected areas. This will include:
 - a Using established mechanisms for release of data and analysis of earthquake-induced land movement in greater Christchurch.
 - b Working with the survey profession on industry-led advice and/or practice notes.
 - c Holding workshops to support release of amended Rules and associated material potentially jointly by the Surveyor-General and the profession.

Option: Provide for guidance or advice (preferred)

This will involve LINZ also generating 'guidance' and/or 'advice' in applying the new Rule. A change to the Cadastral Survey Act to provide for such guidance would be needed.

Table 6: Options analysis: Supporting interpretation of the preferred approach

Applicable area	Benefits	Costs	
Do nothing	Continues to rely on profession and case law to guide application of Rules.	Some uncertainty in how Rules should be applied, which would be reflected in survey costs. Increased scope for dispute between surveyors.	-
Provide for guidance or advice Provides greater certainty in how the Rules should be applied, which will limit survey costs.	should be applied, which will limit survey	Costs of developing guidance would be met by the Crown.	_
		s9(2)(g) s9(2)(ba	

Analysis

- It is proposed that the Cadastral Survey Act be amended to provide the Surveyor-General with the ability to issue guidance to support survey standards and Rules.
- 74 There are a number of areas where guidance could be useful:
 - a Geotechnical information to assist in establishing the nature of ground movement.
 - b Defining technical terms.
 - c Supporting determination of whether individual boundary pegs should be considered 'disturbed'.
 - Clarifying issues that arise following issuance of the new Rules.
- In the absence of guidance, these matters will be clarified through practice and/or case law. The importance to the rebuild of ongoing and cost-effective survey activity on a clear and consistent basis underlines the need for the Surveyor-General to be able to issue such guidance.

Providing certainty to landowners about their legal boundaries

Under the proposed approach, property and infrastructure owners will retain ownership of and access to their physical assets, but the size and shape of their property may be different,

- and will differ from that described on the legal title. LINZ's database of spatial property information may not accurately reflect legal boundaries.
- 77 Without further intervention, the full benefits of Landonline in supporting efficient propertyrelated transactions and improvements will not be realised as it will not be possible to fully rely on freely available spatial information to show the location of boundaries.
- In response, LINZ will adjust the spatial representation of parcel boundaries published through the LINZ Data Service (LDS) and displayed through Landonline for known land movement that occurred as a result of the Canterbury earthquake sequence. This will improve the reliability of information about the location of boundaries that is displayed in Landonline.

Option: Legislation to provide certainty (preferred)

Legislation would provide certainty and assure property owners of ongoing guaranteed title to their land. This would confirm that legal property boundaries are determined on the basis of the boundary movement provisions, and the title of the registered landowner continues to enjoy all the benefits of registration, including indefeasibility and the Crown guarantee.

Table 7: Options analysis: Providing certainty to landowners about their legal boundaries

Applicable area	Benefits	Costs
Do nothing	No additional costs to the Crown.	A greater portion of property-related transactions and improvements will involve surveys to mitigate uncertainty about the location of legal boundaries.
Amend legislation to provide certainty (preferred)	Provides certainty to landowners and related parties (such as lawyers and insurers) about the status of a boundary.	
	Minimises the extent of survey work required to support property-related transactions and improvements.	

Analysis

- 80 It is proposed that legislation be enacted to clarify that in greater Christchurch, physical evidence of boundaries continues to define legal boundaries and that the Crown guarantee of landowner property rights is maintained.
- This amendment removes all doubt about the status of legal title in greater Christchurch, and further mitigates the need for an increased level of survey activity to support property-related transactions and improvements.

Addressing legacy survey issues

Across greater Christchurch, an estimated 300 boundary surveys have been completed between October 2010 and April2015 on a basis different to the preferred approach. In these cases there is a risk that boundary conflicts will arise, creating potential delay and increased cost in development

s9(2)(g)(i), s9(2)(ba)(i) LINZ will work to identify and actively manage any completed surveys with potential to give rise to boundary conflicts.

s9(2)(g)(i), s9(2)(ba)(i)

Boundary adjustments that are routinely undertaken by agreement between adjoining landowners constitute a subdivision under section 218 of the Resource Management Act 1991, and therefore require subdivision consent.

Option 1: Do nothing

Under the status quo, adjustments undertaken to realign boundaries so they are consistent with the preferred approach to defining legal boundaries would require subdivision consent.

The current subdivision consent fees and charges under the Christchurch City Plan are:

\$775 per lot for simple subdivisions (including boundary adjustments), plus processing costs.

Decisions on non-notified consent applications can be expected within 20 working days.

Option 2: Exclude need for subdivision consent (preferred)

Legislation would state that any boundary correction undertaken in greater Christchurch to correct a post-earthquake survey undertaken in a manner inconsistent with the principle that boundaries moved with land will not be a subdivision for the purposes of the Resource Management Act. No subdivision consent would be required.

Analysis

Option 2 is preferred as the need for subdivision consent in these cases would create unnecessary cost and delay. The purpose of the boundary adjustment is to address the legacy survey issues that have emerged following the Canterbury earthquakes, as quickly as possible. Subdivision consent would provide no tangible benefit to the affected parties.

Other issues

- The Christchurch City District Plan (currently under review) sets out the objectives, policies, rules, and methods to achieve the purposes of the Resource Management Act in relation to in living and business / commercial zones.
- Land movement in greater Christchurch has resulted in changes to the size and shape of some parcels around 200 properties have been 'squeezed' beyond usual survey tolerances so that the overall area is reduced. For a portion of these, this has the potential to result in development opportunities being limited as certain area-based thresholds in the District Plan are exceeded. This could affect development and subdivisions in relation to recession planes, minimum lot size, and setbacks.
- It is proposed that property development rights be retained through a change to the Christchurch City District Plan. Further work is required to develop the detail of this change and how it would be implemented, which will be completed in consultation with the Christchurch City Council and CERA and finalised as part of the implementation plan for the package of responses detailed in this paper.
- Petaining building and development rights in this way will preserve the bulk of the value of properties for which the size or dimensions have reduced, but there may still be a loss of value for a small number of properties.

This package of proposals will provide greater certainty to landowners about their legal boundaries, and to surveyors in how to undertake surveys in greater Christchurch.

s9(2)(h), s9(2)(g)(i), s9(2)(ba)(i)

LINZ will monitor this issue and provide further advice to the Minister for Land Information in the event of a material problem emerging. This advice is likely to consider the need to provide property owners and mortgagees with confidence that any latent issues involving loss of land value due to compression would be addressed, thereby mitigating any potential need for point-of-sale surveys, and the costs to property owners and LINZ.

Consultation

- A sector leaders group, including representatives from LINZ, the survey profession, insurers (including EQC), lawyers, Christchurch City Council, DPMC, and CERA, was convened by the Chief Executive of LINZ in March 2015. This group has been involved in developing and testing the nature of the problem, objectives and proposed solution.
- Targeted engagement with the greater Christchurch survey community, real estate industry, banks, and the Council has occurred throughout the process.
- 96 Feedback from CanCERN¹ and CERA's public engagement team indicates that residents are primarily concerned that their property rights and physical property boundaries are maintained. The proposed approach scores best on these measures. Direct engagement with property owners on the proposals will occur through the In the Know Hub.²
- 97 Stakeholders are supportive of the proposed package of solutions. In particular, stakeholders support a solution that sees boundaries move with the land as it most closely resembles landowners' expectations and creates far fewer practical problems than the alternatives.
- No formal consultation process on the package of proposals is planned. This approach reflects the technical nature of the issue and proposed solutions, and the need to implement a solution as quickly as possible to ensure the rebuild is not hampered by uncertainty about surveying practice.
- The Cadastral Survey Act requires formal consultation on Rule changes this is a technically-focused consultation that is of most interest to surveyors and will occur following approval of the suite of policy proposals.

The Canterbury Communities' Earthquake Recovery Network (CanCERN) is a network of Residents Association and Community Group representatives from the earthquake-affected neighbourhoods of Canterbury.

The In the Know Hub allows residents to access information about residential repair and rebuild. The Hub houses representatives from the various earthquake recovery agencies and support services and residents can meet face-to-face, get information and advice, be connected with an agency or financial and support services, and establish the next steps to progress home repair or rebuild. Seminars on various topics are held every Thursday, presented by topic experts with an opportunity for questions.

Conclusions and recommendations

- The uncertainty about how legal property boundaries should be established in earthquake-affected parts of greater Christchurch requires a legislative response to avoid adverse impacts on the pace of the rebuild and landowner rights.
- The preferred solution preserves the well-understood and practical relationship between physical occupation of land and legal boundaries. This minimises costs to landowners that would arise from a lack of certainty, and the need for consequential adjustments to boundaries, and location of structures or improvements.
- A number of complementary and non-regulatory measures will support implementation of the preferred solution. These will address to the extent practical legacy issues that are the result of activity undertaken since 2010.

Implementation plan

- The proposed changes to the Rules must first be enabled through a change to legislation that specifies how surveys should be undertaken in earthquake affected parts of greater Christchurch. To ensure the change to the Rules can be advanced and implemented as soon as possible, the Rules will be drafted in parallel with the new legislation.
- Some uncertainty about the approach to surveying the affected area will remain until the law change has been implemented. This will be mitigated through Ministerial announcement of proposals at the time of decision and legislation to validate surveys undertaken in good faith and without negligence over the period, supported by ongoing direct engagement with stakeholders. Given most surveys are already applying the proposed approach, a detailed transition or enforcement plan is not needed.
- A number of additional actions will be undertaken to support implementation of the changes:
 - a Public communications on the proposals to provide assurance to property owners, and other stakeholders, that property rights are retained.
 - b Supplementary information to assist licensed cadastral surveyors to conduct surveys in the affected areas. This will include release of guidance, data and/or analysis of earthquake-induced movement in greater Christchurch.
 - Surveyor workshops, potentially held jointly by the Surveyor-General and the profession, held to support release of amended Rules and associated material. LINZ will also work with the survey profession to identify scope for industry-led advice and/or practice notes to relation to the new approach.
 - d LINZ adjusting publicly available digital boundary information to take account of known land movement.
 - e LINZ assessing surveys completed since 2010 and aligning these with the proposed approach where necessary or appropriate.

Monitoring, evaluation and review

106 LINZ will report back to the Minister for Land Information by mid-2016 on:

- a whether the proposals in this paper are proving effective to address the situation of earthquake-related land movements in greater Christchurch by June 2016.
- b what further changes to the current regulatory framework, including those of the Cadastral Survey Act 2002, are needed to allow a more timely and effective response to similar situations that may arise in other parts of New Zealand as a result of future earthquakes or other natural hazard events by the end of June 2016.
- the adequacy of baseline funding to implement the proposals contained in this paper by January 2016, to enable any additional funding that might be required to be sought as part of Budget 2016.
- The impact of an earthquake on land depends on the nature of the event and location. It is not clear that the approach proposed for greater Christchurch will be the most appropriate approach for a future event in another area. 'Road testing' the proposed approach in this way allows the immediate issue to be addressed, and provides an opportunity to assess its future applicability.
- Post-implementation, LINZ will monitor the level of survey activity. Surveys are not usually required when trading property, for improvements or issue of resource or building consents, and has not spiked under the status quo. A risk is that regulators, banks, or insurers decide they need additional certainty about the location of legal boundaries, and require surveys to be completed ahead of routine transactions or improvements. A significant increase in survey activity would increase costs to landowners and introduce potential delay in rebuild activity.
- The rate of boundary disputes will be closely monitored, and LINZ will provide advice on the need for an alternative process in the event that the volume begins to increase, or if a streamlined process could assist rebuild activity.
- A full review of the Rules has already been scheduled to start in 2015. The scope of this review is general in nature and will provide an opportunity to consider the implementation of the proposed Rule changes and their fit with the wider set of Rules.

APPENDIX 1:

