

Memorandum for Cabinet

DECISIONS ON CANTERBURY ORANGE ZONES

Purpose

- 1 This paper seeks decisions on rezoning many of the remaining Canterbury Earthquake Orange Zones to Green. It sets out a process and timeframe for rezoning the small number of remaining Orange Zones and communication of these decisions. Some of the remaining areas may be able to be rezoned next week under the joint Ministers Power to Act on Orange Zones.

Executive summary

- 2 On 23 June 2011, the Prime Minister and I announced four land damage zones for greater Christchurch, including two permanent zones (Red & Green) and two temporary zones (Orange & White). There are currently an estimated 8,096 residential properties in the Orange zones.
- 3 Properties were zoned Orange on the basis that while the areas had suffered area-wide damage (implying an area-wide remediation solution), further work was required to assess the options to repair the land and rebuild in these areas. Further geotechnical investigation has revealed that many properties in the Orange zones can be repaired on an individual basis. I propose that, consistent with previous decisions, these areas be rezoned as Green Zones. This decision will provide the owners of 6,430 residential properties with certainty about the future of their land and enable them to move on with their lives.
- 4 The proposal leaves 1,666 properties in the Orange zones, where further work is still required to determine appropriate zoning. Of the remaining areas, Southshore West, Kalapoi West and Brooklands (845 properties in total) are the highest priority because property owners in these areas have been expecting an announcement for some weeks. Decisions on Southshore West will include consideration of the need for any area-wide works along the west edge of the peninsula. I propose that decisions for these areas, and any other remaining Orange areas, be made by me, the Minister of Finance and the Associate Minister of Finance (Hon Joyce), under the existing Power to Act on Orange zones.
- 5 I propose to announce the rezoning of the Orange zones, including any further decisions made by Ministers with Power to Act next week, on Friday 28 October. These announcements will coincide with the announcements by the Minister of Building and Housing of new technical land categories. These land categories indicate the likely effects of any future damaging earthquakes in terms of liquefaction related settlement and/or lateral spread. It should be noted that most of the areas I propose be rezoned Green are in areas with moderate to severe liquefaction hazard, posing risk in future large earthquakes, and therefore require site-specific geotechnical investigation before properties can be rebuilt.

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- 6 My officials will also liaise with relevant councils to identify any obstacles to consenting works in the rezoned areas, and in TC3 areas more generally, and to monitor any other issues (e.g. insurer approaches to claims settlement) that may affect a property owner's ability to rebuild in these areas.

Background

Previous Zoning Decisions

- 7 In the initial Canterbury Earthquake zoning announcements on 23 June 2011, Orange Zones were established for areas which required further work to determine the appropriate permanent zoning category. Zones were established based on the severity and extent of land damage, the cost-effectiveness and social impacts of land remediation.
- 8 Criteria were previously agreed by Cabinet to classify areas as either a Red Zone or Green Zone [CAB Min (11) 24/15 refers]. Red Zones have been declared in areas where there is area-wide damage (implying an area-wide solution) and an engineering solution to remediate the land damage would be uncertain, disruptive, not timely, nor cost effective. Green Zones have been declared in areas where land damage can be repaired on an individual basis as part of the normal insurance process.
- 9 Following subsequent announcements on Kaiapoi on 18 August 2011, there are currently an estimated 8,096 residential properties¹ in the remaining Orange Zones. I consider that it is important to provide clarity to property owners in these areas as soon as possible.

Power to Act

- 10 Cabinet previously authorised a group of Ministers, comprising the Minister of Finance, the Minister for Canterbury Earthquake Recovery and the Associate Minister of Finance (Hon Steven Joyce), to have Power to Act to take decisions on reclassifying the Orange Zone areas until 25 February 2012 [CAB Min (11) 34/19 refers].

Guidance on Foundation Design

- 11 Important to making decisions on Orange Zones is confidence that there are foundation solutions available for the rebuilding of damaged properties.
- 12 Over recent months, the Department of Building and Housing (DBH) has been developing guidance on appropriate foundation designs for rebuild/repairs in greater Christchurch. Foundation designs and guidance have been developed for different categories of damaged land. These categories describe likely effects of liquefaction related settlement and/or lateral spread in any future damaging earthquake and provide guidance on the process for rebuilding.

12.1 TC1 areas are unlikely to have future land damage from liquefaction and ground settlements are expected to be within normally accepted tolerances so there are no additional foundation requirements.

¹ Includes vacant lots

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12.2 TC2 areas may get minor to moderate land damage from liquefaction in a future large earthquake. Lightweight construction or enhanced foundations are likely to be required to address this.

12.3 TC3 areas may get moderate to significant land damage from liquefaction in future significant earthquakes. For repair and rebuild work on foundations requiring a building consent, a site-specific geotechnical investigation will be required to identify and design the appropriate foundation solutions for the property.

- 13 For more information on the Technical Categories see Appendix 1.

Proposed New Green Zones

- 14 Much of greater Christchurch was zoned Green, based on there being no significant issues which prevent rebuilding in these areas. In the Green zones, a key factor is that even though land damage may be present on some properties, most properties can be repaired on an individual basis as part of the normal insurance process.

withheld under section 9(2)(g)(i)

- 15 Further geotechnical investigation of the Orange subzones has revealed that many of these remaining areas can be repaired on an individual basis. I propose that Orange Zones where land damage can be repaired on an individual basis be rezoned as Green Zones (identified on the map in Appendix Two with a suburb list provided in Appendix Three).
- 16 This decision will provide the owners of 6,430 residential properties with certainty for property owners about the future of their land and will enable them to work with their insurer and EQC to repair, rebuild or replace their properties. Green Zoning will be consistent with the rebuild objectives previously agreed by Cabinet:
- 16.1 Certainty of outcome for home-owners as soon as practicable;
 - 16.2 Create confidence for people to be able to move forward with their lives;
 - 16.3 Creating confidence in decision making processes (for home-owners, business-owners, insurers and investors);
 - 16.4 Using the best available information to inform decisions;
 - 16.5 Having a simple process in order to provide clarity and support for land-owners, residents, and businesses in those areas.
- 17 In some of these areas, there will be land damage, especially along waterways, where it may make sense for individual property owners to work with their neighbours in their stabilisation and repair of damaged land. Though individual solutions will be available, I have asked my officials to advise me what role (if any) exists for the government to facilitate group land remediation works.

Spencerville

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- 18 Under the above proposal, Spencerville will become a Green Zone. Six properties in this area are being remediated via a pilot project which seeks to test new solutions (i.e., stone columns) designed to protect the homes from further lateral spread and settlement. As the programme involves ground improvement/betterment, it goes beyond the limits that are placed on funding from EQC's Natural Disaster Fund. Following the 4 September 2010 earthquake (and prior to 22 February 2011), Ministers (with Power to Act) agreed that the Crown would contribute \$1.1m toward the additional land remediation works.
- 19 This project is underway with all properties demolished and 25% of the stone columns installed, but the work was put on hold shortly after the 23 June land zoning decisions until further zoning decisions (i.e. Red Zone or Green Zone) were made. The contractor is currently being paid a retainer while the work is on hold. As the work has already begun, ceasing the work at this stage including reinstating the land and landscaping will incur costs and will be disruptive for the owners concerned. I have instructed officials to report back to me on the implications of the proposed rezoning decisions for the Spencerville land remediation pilot project.

Technical Category of proposed Green Zones

- 20 The vast majority of properties in the proposed Green Zones are expected to be in TC3. There are already 22,000 TC3 properties in the existing Green Zone properties. For properties requiring rebuilding, an appropriate foundation solution may be more costly than for TC1 and TC2. The additional cost for a specific property will depend on the condition of the land.
- 21 A research trial is currently underway to test a range of solutions for TC3 foundations. Once complete, DBH will be able to provide more accurate guidance in relation to the cost of enhanced foundation repair in TC3 areas. These trials are expected to be complete in late October with indicative costings available early December. DBH plan to release the results of the trial in mid-December, and will progressively refine design guidance with the aim of providing design recommendations by the end of February 2012. Individual geotechnical assessments will be required in these areas, irrespective of the results of the trial and subsequent guidance.

Further work

- 22 A number of potential issues may arise in Green zones that may slow down and/or complicate the repair and rebuild process, particularly on TC3 land. For example, the approach councils take to consenting (including the treatment of flood management areas and rebuilding on TC3 land) and the approach EQC and insurers take to settling claims where land damage has been suffered pose some risks to the recovery. I have instructed my officials to liaise with local authorities, insurers and EQC and to advise me on any consenting, insurance or other issues that may be barriers to timely and cost effective remediation and to report back to me.

Area-wide/coordinated land works

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withheld under section 9(2)(j)

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Insurance settlements

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withheld under section 9(2)(j)

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withheld under section 9(2)(j)

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withheld under section 9(2)(j)

Remaining Orange Zones

- 28 The above proposal leaves 1,666 properties in the Orange Zones, where further work is required to determine the appropriate zoning.
- 29 I am awaiting further advice from officials on the rezoning of the other Orange Zone areas. Of these, Southshore West, Kaiapoi West 2 and Brooklands are the highest priority because property owners in these areas have been expecting an announcement for some weeks.
- 30 I propose that decisions on Southshore West, Kaiapoi West 2 and Brooklands be made this week by Minister English, myself and Minister Joyce under our Power to Act on Orange Zones [CAB Min (11) 34/19 refers]. My preference is for rezoning decisions on these areas to also be announced on Friday 28 October.

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- 31 Of the remaining Orange Zones not discussed above, I expect to receive final zoning advice from officials in time for an announcement over the coming weeks. In these areas, T & T has indicated that further assessment is required to determine if an individual solution is practical, and if not, the nature and cost of area-wide works which would be required for rebuilding.

Consultation

- 32 Treasury and Department of Building and Housing were consulted on a draft of this paper. Treasury supports the recommendations in the paper.
- 33 The Department of the Prime Minister and Cabinet was informed of this paper.

Financial implications

- 34 There are no direct financial implications arising from the recommendations in this paper.

Human rights implications

- 35 The proposals in this paper are not inconsistent with the New Zealand Bill of Rights Act 1990, or the Human Rights Act 1993.

Legislative implications

- 36 There are no legislative implications arising from this paper.

Regulatory impact and compliance cost statement

- 37 A regulatory impact statement is not required at this time as there are no regulatory changes.

Gender implications

- 38 There are no gender implications associated with the proposals in this paper.

Disability perspective

- 39 There are no disability implications associated with the proposals in this paper.

Publicity

- 40 I propose to announce the re-zoning of the Orange Zones, including both those in this paper and any subsequent decisions this week by Ministers with Power to Act noted in Paragraph 31, on Friday 28 October.
- 41 These announcements will be coordinated with those by the Minister for Building and Construction on the release of the technical guidance for foundation designs.

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- 42 Letters of notification, updating the LandCheck, and CERA websites are being prepared in anticipation of the decisions in this paper. A series of community meetings which will include input from DBH and EQC will be scheduled post the announcement
- 43 A letter of advice will be sent to all Orange Zone properties to inform them of their new land status (including those that remain Orange in the interim). It will include a fact sheet on the DBH technical guidance.

Recommendations

It is recommended that Cabinet:

Background

- 1 **Note** that on 23 June 2011, the Prime Minister and I announced four land damage zones for greater Christchurch.
- 2 **Note** that properties were zoned Orange on the basis that area-wide damage had been suffered but further work was required to assess the options to repair the land and rebuild in these areas.
3. **Note** that there are currently an estimated 8,096 residential properties in the remaining Orange zones.
- 4 **Note** that engineering experts have divided the land in the greater Christchurch area into three technical categories (TC), which differ in terms of their susceptibility to liquefaction related settlement in future large earthquakes:
 - 4.1 TC1 areas are unlikely to have future land damage from liquefaction and ground settlements are expected to be within normally accepted tolerances so there are no additional foundation requirements.
 - 4.2 TC2 areas may get minor to moderate land damage from liquefaction in a future large earthquake. Lightweight construction or enhanced foundations are likely to be required to address this.
 - 4.3 TC3 areas may get moderate to significant land damage from liquefaction in future large earthquakes. For repair and rebuild work on foundations requiring a building consent, a site-specific geotechnical investigation will be required to identify and design the appropriate foundation solutions for the property.
- 5 **Note** that the Department of Building and Housing has developed guidance and standard foundation designs for TC1 and TC2 and a trial is underway to test foundation solutions for TC3, which will inform future guidance and enable better estimation of the costs of rebuilding on TC3 land, to be progressively released from mid December 2011.
- 6 **Note** that Cabinet has previously authorised a group of Ministers, comprising the Minister of Finance, the Minister for Canterbury Earthquake Recovery, and the Associate Minister of Finance (Hon Steven Joyce), to have Power to Act until 25 February 2012 to take decisions on classifying the Orange Zone areas [CAB Min (11) 34/19 refers].

Proposed New Green Zones

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- 7 **Note** that a key principle underpinning previous Green zone decisions is that land damage can be repaired on an individual basis as part of the normal insurance process.
- 8 **Note** that further geotechnical investigation of the Orange zones has revealed that properties in many of the remaining Orange areas can be repaired on an individual basis.
- 9 **Agree** that 6,430 of the remaining Orange zone properties, as indicated on the attached map in Appendix 2, be rezoned Green on the basis that the best available information indicates individual land remediation solutions are possible.
- 10 **Note** that most of the properties to be rezoned Green under Recommendation 9 will be in Technical Category 3, and will therefore require site-specific geotechnical investigation where a building consent is required for foundation repairing or rebuilding, and will likely face higher costs of rebuilding associated with land strengthening or enhanced foundation requirements.
- 11 **Note** that I have instructed officials to report back to me on the implications of the above rezoning decisions for the Spencerville land remediation pilot project.
- 12 **Note** that I have instructed officials to liaise with local authorities, insurers and EQC and to advise me on any consenting, insurance or other issues that may be barriers to cost effective remediation and to report back to me.
- 13 **Note** that some properties to be Green zoned may benefit from coordinated land works, especially along waterways (e.g. where slumping has occurred).
- 14 **Note** that I have directed my officials to advise me what role (if any) exists for the government to facilitate group land remediation works.
- 15 **withheld under section 9(2)(f)(iv)**

Remaining Orange areas

- 16 **Note** that in the remaining Orange zones, consisting of 1,666 properties identified on the attached map in Appendix 2 and listed at Appendix 3, further work is still required to determine appropriate zoning.
- 17 **Note** that, of the remaining areas, Southshore West, Kaiapoi West and Brooklands are the highest priority because property owners in these areas have been expecting an announcement for some weeks.
- 18 **Note** that any decisions regarding the rezoning of the remaining Orange areas can be made by Ministers with Power to Act under an existing authority [CAB Min (11) 34/19 refers].
- 19 **Note** that I have asked officials to report to Ministers with Power to Act by Wednesday 26 October on possible rezoning decisions for Brooklands and Kaiapoi West 2 and the timeframes for decision making for the remaining Orange areas.
- 20 **Invite** the Minister for Canterbury Earthquake Recovery to report back to Cabinet on 31 October 2011 on decisions made by Ministers with Power to Act referred to in Recommendation 18.

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Announcements/communications

- 21 **Note** that I plan to announce the Orange rezoning decisions on Friday 28 October.
- 22 **Note** that this announcement will be closely coordinated with the announcement by the Minister of Building and Housing of new technical land categories and the release by the Department of Building and Housing of related guidance material.



Hon Gerry Brownlee
 Minister for Canterbury Earthquake Recovery

21, 10, 2011

Released by the Minister for Canterbury Earthquake Recovery

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Appendix 1

Department of Building and Housing Technical Categories for Foundation Design

- 1 Since the first earthquake on 4 September 2010 there has been extensive scientific and geotechnical investigation and research undertaken by a range of experts to identify land issues and ways to reduce the risk of damage to homes and people in any future earthquakes. Each significant aftershock has provided new information.
- 2 When the land was zoned green, homeowners were informed that varying degrees of land damage as a result of liquefaction could be present in the green zone and that some properties might require specific engineering design to comply with DBH guidelines.
- 3 Engineering experts have divided land in the greater Christchurch urban area green zone into three technical categories. These categories describe likely effects of liquefaction related settlement in future large earthquakes. Foundation guidelines are detailed to respond to the varying degrees of liquefaction.
 - 3.1 **Technical category 1 (TC1):** Future land damage from liquefaction is unlikely, and ground settlements are expected to be within normally accepted tolerances. Standard foundations (NZS 3604) are acceptable subject to shallow geotechnical investigation.
 - 3.2 **Technical category 2 (TC2):** Minor to moderate land damage from liquefaction is possible in future large earthquake events. Lightweight construction or enhanced foundations are likely to be required such as enhanced concrete raft foundations (i.e. stiffer floor slabs that tie the structure together).
 - 3.3 **Technical category 3 (TC3):** Moderate to significant land damage from liquefaction is possible in future large earthquakes. Foundation solutions are required to be based on site-specific geotechnical investigation and specific engineering foundation design.
- 4 DBH is currently undertaking a research trial in Christchurch of foundation systems to test to test a range of innovative solutions for properties in TC3. This trial is expected to be completed, internationally peer reviewed, and updated guidance issued for repairing or rebuilding homes on land in the TC3 category by December. Once complete, DBH will be able to provide more accurate estimates of the cost of foundation repair in the TC3 areas.
- 5 As at 10 October, it is estimated there are about 23,000 homes in TC1; 80,000 homes in TC2; and about 22,000 homes in TC3 in the current Green Zone. Rezoning the current Orange Zone properties is expected to increase the number of properties in TC3.
- 6 DBH and CERA are working together to ensure that the messaging around the technical categories and zone decisions are consistent. The public messages are still being developed and may differ slight to the above.

Appendix 3

List of areas proposed for Green Zoning

Proposed Green Zone area – refer map at Appendix 2	Residential property count
Aranui	383
Beckenham	11
Belfast	43
Bishopdale	90
Brooklands South	5
Burwood East	266
Central City - River north	132
Fendalton North	242
Fendalton South	293
Halswell	157
Hoon Hay	65
Kaiapoi Lakes	13
Kaiapoi West 3	29
Kainga	1
Merivale	143
New Brighton Central	35
New Brighton Road West	129
Opawa	94
Papanui	36
Parklands	2003
Parklands - Queenspark Ave	13
Redcliffs	92
Redwood	35
Richmond North	246
Southshore East	400
Spencerville	212
St Albans	274
St Martins	143
Sydenham	17
Travis	272
Waltham	79
Woolston	477
TOTAL PROPOSED FOR GREEN ZONE	6,430

¹ Includes vacant lots

Remaining Orange Zones - refer map at Appendix 2	Residential property count
Aranui	383
Avonside	177
Brooklands	417
Burwood – Horseshoe Lake	8
Burwood East – River side	31
Central City – River south	117
Dallington	36
Kalapoi West 2	27
Linwood	53
Parklands – Puhara Ave	40
Richmond South	144
South New Brighton	101
Southshore West	401
Wainoni	88
Woolston	26

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