

CERA

Canterbury Earthquake Recovery Authority

24 SEP 2012

Judy Grindell
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Ref: CER/322

Dear Judy

Thank you for your Official Information Act 1982 request, received on 28 August 2012. You requested the following:

"Please provide detailed information as to why the northern boundary of the Southshore red zone was drawn where it is. The house on the TC3 side of the boundary is only a metre from the red zone. Please also provide details for why the area in Bridge Street closet to the bridge and Kibblewhite Street were zoned TC3. I would like to see the comparative rationale."

You further clarified on 12 September that you are not concerned about the rationale for the different Technical Categories green boundaries so much as the rationale for how these particular boundaries are drawn. And also the comparative rationale and data for boundaries in South New Brighton, particularly near the bridge and estuary.

Southshore Red Zone Boundary

The location of the red zone boundary for Southshore was determined based on an area-wide assessment of observed land damage following the Canterbury earthquakes, and likely land performance in future earthquakes.

For properties on the red-zone side of this boundary line, CERA's geotechnical engineering advisors determined that area-wide engineering works (such as a deep and wide zone of ground improvement along the estuary coastline) would be required to address the potential for extensive area-wide ground movements, before repair and rebuilding of homes would be possible.

CERA's geotechnical engineering advisors determined that for properties on the green-zone side of this boundary line, damage to land and homes can be addressed on an individual basis by homeowners working with EQC and their insurance company. The Department of Building & Housing have provided guidance for engineers, to assist with the design of individual foundation solutions which are suitable for land such as the green-zone areas of Southshore (refer to: <http://dbh.govt.nz/canterbury-earthquake-residential-building>). Specifically, for the green-zone areas in Southshore, CERA's engineering advisors assessed that the potential severity of lateral spreading in future earthquakes falls into the "Minor to Moderate" or "Major" lateral ground stretch categories (refer to Section C2.2 of the DBH TC3 guidance document). For land in these categories, a range of appropriate TC3 foundation options are presented in the DBH guidance document (refer to Section C5.1 of the DBH TC3 guidance), including shallow or deep site ground improvement, and surface structures with shallow foundations.

The location of the red-zone boundary lines has been determined on an appropriately conservative basis, to give confidence that individual solutions are feasible for properties in the green-zone area.

Bridge Street TC3 Area

CERA's geotechnical advisors advised that while significant liquefaction and ground cracking has occurred in this area, only moderate local-scale lateral ground movements have occurred, therefore no area-wide engineering works are required to enable repair and rebuilding of homes to commence. The observed land performance, and the general ground conditions inferred from the suburb-wide ground investigations, indicate that insurance claim settlement, repair or rebuilding is likely to be feasible on an individual property-by-property basis, following the guidance provided in the DBH guidance documents. For this area, CERA's engineering advisors assessed that the potential severity of lateral spreading in future earthquakes falls into the "Minor to Moderate" or "Major" lateral ground stretch categories.

Based on the initial suburb-wide ground investigations, CERA's geotechnical advisors concluded that various TC3-type foundation systems included in the DBH guidance document are likely to be feasible in this area: including shallow or deep site ground improvement, and surface structures with shallow foundations.

Information used by CERA for Decision-Making

Information on the criteria used by CERA to determine the appropriate land zoning for an area is presented in the Cabinet papers available on the CERA website at <http://cera.govt.nz/cabinet-papers>. These criteria include assessment of various engineering issues, as well as a more general assessment of certainty, disruption, timeliness, and cost-effectiveness. The technical information used by CERA in making zoning decisions is presented in detail in the records of the Canterbury Zoning Review Advisory Group, available on the CERA website at <http://cera.govt.nz/zoning-review>.

You have the right to ask the Ombudsman to investigate and review my decision under section 28(3) of the Official Information Act.

Yours sincerely



Roger Sutton
Chief Executive