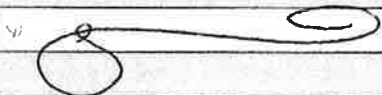





CDEM Resilience Fund project application form

Application for CDEM Resilience Collaborative fund approval	
Project title	Geological Hazard Review
Date of application	28/2/12
Details on application	
Lead local authority	Gisborne
CDEM Group	Gisborne
Other local authorities or Groups supporting the proposal	n/a
Project description	
<p>Executive summary The GDC had a range of reports done in 1997 on its geological hazards, including liquefaction. The liquefaction report was based on the current limited knowledge and produces some broad scale maps that have been used since for indicative planning purposes and requiring developers to do more investigative site research. About 6-7years ago staff started to question the currency of the data and in early 2011 a proposal was requested for GNS to provide a new report using client and new council data. Unfortunately the cost caused the staff to have second thoughts and the proposal lapsed.</p> <p>To progress this issue a refined proposal has been prepared by GNS to at least give some better maps of the liquefaction areas and hence a better indication of future requirements/request to be placed on developers prior to any new developments.</p> <p>This same proposal was submitted last year but was declined, we were told because we should be using some non-existent rule that GNS has – there is no toll or one being developed.</p> <p>The liquefaction risk is important as a land-use planning tool but internal funding for this sort of project is almost non-existent and is unlikely to ever be completed without external assistance.</p>	
<p>Problem/opportunity the current information concerning liquefaction held by Council is dated and does not take into account current data the results of recent events.</p>	
<p>Alignment with identified goals and objectives Project aligns with the goal and objectives of the Group plan relating to reduction and hence to the reduction goal in the National CDEM Strategy</p>	
<p>Dissemination of benefits to sector Information from the project will be to update information in the District Plan hazard overlays, assist with the processes of new subdivision applications and then dissemination of current hazard informatio to the Public via LIM's. It will also used to enhance public education programs as the questions of liquefaction are one of the current concerns.</p>	

Project design		
Project manager	Richard Steele	
Other project members	Derek Birks and Laura Savage	
External providers/contractors	GNS	
Deliverables		
Milestone	Date for completion	Cost
	30 th June 2014	
Identified risks		
Risk	Suggested management	
nil		
Funding request and use		
CDEM resilience fund contribution	\$35,000 or \$25,000 dependant on use of Council contribution	
Local authority contribution	\$10,000 there is a proposal to bring in a local consultant to assist in the project but details will not be available until after the application close so this will either be used fund that activity or subtracted from the total invoice at the end of the process	
Other sources of funding	Environlink \$20,000	
Expenditure <i>[Please supply details]</i>	\$55,000	
Application confirmation		
Approval of Chief Executive		
CDEM Group comment		
Comment		
Approval of Coordinating Executive Group Chair		



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PROPOSAL FOR THE REVIEW AND UPDATE OF LIQUEFACTION HAZARD IN THE GISBORNE DISTRICT

Proposal number 121343044

Prepared in confidence for:

**Richard Steele
Gisborne District Council**

8 March 2013

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INTRODUCTION

This proposal is submitted by the Institute of Geological and Nuclear Sciences Limited (GNS Science) in response to a request from Richard Steele, Gisborne District Council, for a review and update of existing liquefaction and lateral spreading hazard information.

This proposal has been prepared with consideration of details supplied by Richard Steele.

BACKGROUND TO PROJECT

The purpose of this project is to enable Gisborne District Council (GDC) to update and refine existing hazard maps related to liquefaction and associated ground failure hazards. This will allow GDC to better manage land use by determining the level of risk posed by those hazards at a site, which will assist with decision making for subdivision and building consent applications.

PROJECT OBJECTIVES

The objective of this project is to review and update existing liquefaction hazard and amplification maps produced in 1997, including refining the scale and accuracy of the mapping. The review would include an assessment of lateral spreading risk within Gisborne City, and improved definition of liquefaction hazard zones. The mapped zones will match the zones mapped in Mazengarb et al 1997.

PROJECT DESIGN

Liquefaction and lateral spreading hazard in the Gisborne District was mapped by Mazengarb et al (1997). They categorised liquefaction hazard into high, medium and low, based on soil and subsurface material information available at the time. The assessment covered Gisborne urban area (Figure 7.2), the Poverty Bay flats (Figure 7.1), Te Karaka (Figure 7.3), Tolaga Bay (Figure 7.4), Tokomaru Bay (Figure 7.5), Te Puia (Figure 7.6), Ruatoria (Figure 7.7) and Te Araroa (Figure 7.8).

Most of the City of Gisborne and the Poverty Bay Flats were categorised as high liquefaction potential due to their location adjacent to the Waipaoa River, and several tidal lagoons formed by the Turanganui and Waimata rivers. Liquefaction potential is compounded in these areas by the high sediment loads in the Waipaoa River, and high rates of deposition on the floodplain. The 1997 liquefaction categorisation can be refined with the inclusion of new soil and drillhole data collected since 1997.

An update and refinement of the liquefaction potential for the Poverty Bay flats and Gisborne City, together with the other townships in the District, would involve the following steps:

1. Data gathering: Gather geotechnical data from GDC and other relevant organisations.
2. Analysis: Analysis and interpretation of geotechnical data, followed by compilation of the map and GIS layers.
3. Reporting: preparation of a report outlining the results of the project.

An assessment of lateral spreading at different earthquake shaking intensity levels above MM7 will be made using information from other earthquakes, including the December 2008 Gisborne, September 2010 Darfield, and February 2011 Christchurch earthquakes.

REFERENCES

Mazengarb C, Cousins J, Dellow G, Townsend T 1997, Earthquake and related hazards in the Gisborne District, GNS Science Client Report 1997/44692D.13.

PROJECT STAFF

The project will be managed by Sally Dellow will be responsible for project management and client liaison.

GNS Science technical staff who will be involved in this project are:

Sally Dellow – Engineering geologist

A 3D modelling and GIS technician

Other GNS Science staff will be involved in this project in peer review.

CONTRIBUTIONS BY GISBORNE DISTRICT COUNCIL

Gisborne District Council will provide the following:

- Provision by GDC for GNS Science to access all geotechnical data on record, including SPT, CPT, other borehole records and subsurface data.
- LiDAR data for use as a base map, if available.
- Information on the residential growth areas including maps, feasibility studies and detailed soil assessment.
- Specification of GDC's GIS and map requirements
- Access to soil maps and floodplain drillhole data from Landcare Research

DELIVERABLES

A concise report will be produced that addresses the project objectives. It will include a liquefaction susceptibility map and GIS layer together with an assessment of lateral spreading at different earthquake shaking intensity levels above MM7. The report will be provided in electronic (PDF) form, along with 2 hard copy versions of the final report. All datasets will be provided in MS Excel format. GIS data layers will be provided in ESRI Shapefile format. Maps and digital imagery will be accompanied by a list of attributes and comprehensive metadata.

TIMELINE

The final completion date of the project will be 31 June 2014.

COSTS

All costs are quoted in New Zealand dollars and are expressed exclusive of New Zealand Goods & Services Tax. All disbursements will be charged at cost + 10%.

Total cost: \$55,000 + GST


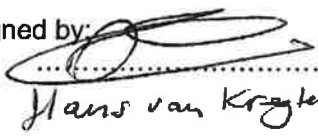
TERMS AND CONDITIONS

This work would be undertaken subject to GNS Science standard terms and conditions (attached).

This proposal remains valid until 1 April 2013, after which time GNS Science reserves the right to review and modify the proposal if necessary.

Please confirm your acceptance of this offer by signing and dating both copies of this proposal and returning one original copy to me.

Should you have any queries please do not hesitate to contact Business Development Manager Martin Craig m.craig@gns.cri.nz, 04-570 4126 or myself.

<p>Kind Regards</p>  <p>Dr Terry Webb Director of Natural Hazards 8 March 2013</p>	<p>Accepted for and on behalf of Gisborne District Council</p> <p>Signed by: </p> <p>(Signature):</p> <p>Date: 12/3/13</p>
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