VISION CONSULTING | GEOSPATIAL ANALYSIS SERVICES

HAZARD MAPPING

Our specialised mapping techniques combine geological expertise with advanced data analysis to identify areas at risk of liquefaction during earthquakes. This information empowers councils and communities to make informed decisions about land use, infrastructure development, and building codes, promoting safer and more resilient communities. Think of it as creating a "liquefaction hazard map," similar to a flood zone map, that helps guide safe and sustainable development in earthquake-prone areas.

CASE STUDY

LIQUIFACTION VULNERABILITY FAR NORTH DISTRICT

TASK:

To undertake a district-wide liquefaction vulnerability study to inform land-use planning and building consent assessments in the Far North District.

PROJECT APPLICATION:

Guiding safe and sustainable development through proactive liquefaction risk assessment by identifying and mapping areas in the Far North District potentially susceptible to liquefaction during earthquakes.

CHALLENGES

- The Far North District, while considered low-risk, could experience liquefaction during a significant earthquake, potentially causing damage to buildings and infrastructure.
- Existing information on liquefaction vulnerability in the district was limited, hindering informed planning and development decisions.
- A comprehensive assessment was needed to identify areas potentially susceptible to liquefaction and guide appropriate mitigation measures.

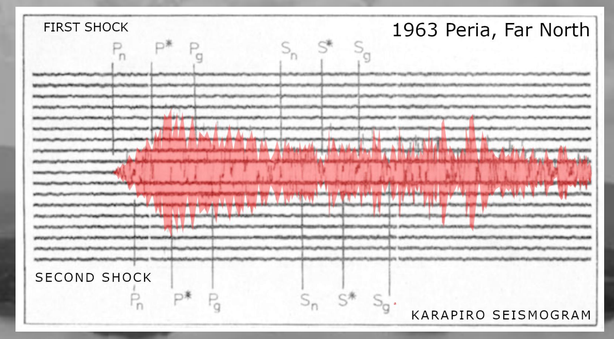
SOLUTIONS

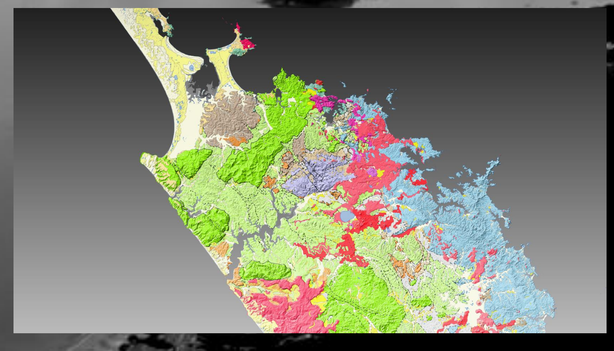
- Conducted a Level A – Basic Desktop Assessment, utilizing LiDAR data, geological maps, and other available information.
- Mapped the district into sub-areas based on landforms, topography, and potential for lateral spreading.
- Classified each sub-area into liquefaction vulnerability categories: Undetermined, Possible, and Unlikely.
- Created a GIS map layer identifying liquefaction-prone areas, enabling easy integration into the FNDC's systems.

BENEFITS

- Provided a district-wide understanding of liquefaction vulnerability, informing planning and development decisions.
- Enabled proactive risk mitigation by identifying areas where further investigation or specific engineering solutions may be required.
- Equipped the FNDC with a tool to assess liquefaction risk during building consent applications, promoting safer construction practices.
- Facilitated public awareness of liquefaction hazards through a planned press release and public access to the GIS map layer.

> “VISION'S LIQUEFACTION VULNERABILITY STUDY PROVIDED US WITH INVALUABLE DATA TO GUIDE OUR PLANNING AND DEVELOPMENT DECISIONS, ENSURING A SAFER & MORE RESILIENT FAR NORTH DISTRICT.
>
> BEN PERRY
> MANAGING DIRECTOR
> VISION CONSULTING ENGINEERS





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