

2016紐西蘭Kaikoura地震勘災摘要報告

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摘 要

2016年11月14日紐西蘭南島之 $M_w=7.8$ Kaikoura地震，發生世界上最複雜之斷層破裂過程，估計引致山崩數目約為80,000-100,000處，並因沿海岸1號公路中斷，引起農牧與觀光業巨大損失。此地震以複雜地表斷層跡、海岸抬升、山崩與堰塞湖、與威靈頓港灣區的放大效應聞名。國震中心勘災團隊於隔年4月走訪災區，蒐集相關資料，將勘災見聞整理成摘要報告，與地工界分享，並針對與0206花蓮地震相關之勘災經驗進行探討。

關鍵字：凱庫拉地震、斷層、山崩、堰塞湖、土壤液化。

The Summary Report of Geotechnical Reconnaissance in 2016 Kaikoura Earthquake

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Abstract

The 14 November 2016 Kaikoura Earthquake was a $M_w=7.8$ earthquake that occurred on a complex fault rupture process in the South Island of New Zealand, triggered an estimated number of 80,000-100,000 landslides. The No.1 highway was severely damaged by landslides and remained broken for a long period, attributing to huge losses of agriculture, animal husbandry, and tourism. This earthquake featured complex fault rupture, coastal uplift, landslides and landslide dams, and site amplification effect in the Wellington city bay. The reconnaissance team of NCREE investigated the disaster area in April 2017 and collected relevant data. This summary report included the seeing and learning experience based on the reconnaissance, and is intended as a sharing with geotechnical communities and can be compared to relevant experiences of the 0206 Hualien Earthquake.

Key Words : Kaikoura earthquake, fault, landslide, landslide dam, soil liquefaction.

一、前 言

2016年11月4日Kaikoura地震發生於紐西蘭南島中部，震央位於Culverden東北約15公里和Kaikoura小鎮西南60公里處，深度為15公

里，地震矩規模為 $M_w=7.8$ 。其主震延時達2分鐘，強烈震動發生在初震後50秒，其斷裂長度達150公里，包括外海34公里之斷裂，此斷裂牽涉十幾條斷層系統之活動，為世界上最複雜之斷層破裂，最大右移斷層錯距約達12公尺。

此次地震因強震範圍為農牧與海岸休閒觀