

9 June 2021

Mr Forrest Suo  
HND TS Limited  
6 Scott Road  
Hobsonville  
Auckland 0618

Dear Forrest

**RE: Fast Track Summary - 6 - 10 The Strand / 21 Hurstmere Road, Takapuna, Auckland**  
**(Our Reference: 17733.000.000\_01)**

## 1 Introduction

ENGEO Limited (ENGEO) was requested by HND TS Limited to provide a geotechnical summary for the proposed development at 6 - 10 The Strand / 21 Hurstmere Road, Takapuna, Auckland (the site). This work has been carried out in accordance with our signed agreement with HND TS Limited.

ENGEO is an environmental and geotechnical consultancy with five offices and more than 90 technical staff in New Zealand. We also draw support from a network of over 220 technical staff in Australia and the United States. ENGEO specialises in providing geotechnical and contaminated land services to developers and landowners to support construction services. Our reports are used to support Resource and Building Consent Applications, and to ensure that works are conducted with due consideration to the potential risks arising from contaminated land and geotechnical properties of the ground.

My name is Jamie Rhodes and I have worked for ENGEO since 2018. I have a Bachelor's Degree in Environmental Engineering from the University of Melbourne (2005) and I have been working on contaminated land projects since 2007. Since 2011 I have been employed as a contaminated land consultant on projects which involve identification, management and remediation of contaminants in soils in New Zealand.

ENGEO have been engaged to undertake a Detailed Site Investigation into contaminated land at the site and to provide contaminated land consulting services to support the proposed development.

## 2 Site History

With regard to the site at The Strand, from at least the 1940s, the area was residential land. Residential land use itself is not recognised on the “HAIL” (Hazardous Activities and Industries List; MfE, 2011); however, the use of lead based paints and asbestos containing materials in older buildings often results in lead and asbestos impacts in soil. This is typically constrained to topsoil around the buildings and associated features (e.g. fence lines). However, during demolition of the previous site dwellings (which occurred prior to the construction of the existing buildings and roads), impacted topsoil could have been redistributed around the site.

It is likely that, during the redevelopment into retail / commercial land use in the 1970s and 1980s, all or the majority of topsoil was stripped and disposed off-site due to its unfavourable geotechnical properties. Our geotechnical investigations have supported this, with no areas of deep or buried topsoil being identified.

## 3 Site Investigations

There are several small garden areas or grassed areas around the current buildings. To determine whether the topsoil remaining in these areas was impacted by lead or asbestos, ENGEO collected six samples of this soil and analysed these for lead and asbestos at an independently accredited laboratory.

Asbestos was not detected in any of six samples; lead was detected at concentrations between 42 mg/kg and 320 mg/kg, with an average concentration of 259 mg/kg. The natural background level of lead in Auckland soils is 65 mg/kg. However, the concentration which is considered acceptable for high-density residential land use is 500 mg/kg. Therefore remediation of this topsoil is not required as part of redevelopment.

## 4 Development Implications

Due to its unfavourable geotechnical properties and the proposed redevelopment footprint, topsoil on-site will need to be removed and disposed off-site as part of redevelopment works.

The disposal of topsoil containing lead above the natural background concentrations is a common issue addressed by most redevelopments in Auckland where a building was on-site prior to the 1970s.

A Controlled Activity consent is required under the Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health), 2011 (NES:CS). This includes the provision of a Site Management Plan to ensure that topsoil is disposed to a licensed landfill facility.

ENGEO has been engaged to prepare a Detailed Site Investigation and a Site Management Plan in support of a Controlled Activity consent application under the NES:CS.

## 5 Limitations

- I. We have prepared this report in accordance with the brief as provided. This report has been prepared for the use of our client, HND TS Limited, their professional advisers and the relevant Territorial Authorities in relation to the specified project brief described in this report. No liability is accepted for the use of any part of the report for any other purpose or by any other person or entity.
- II. The recommendations in this report are based on the ground conditions indicated from published sources, site assessments and subsurface investigations described in this report based on accepted normal methods of site investigations. This report does not purport to completely describe all the site characteristics and properties. The nature and continuity of the ground between test locations has been inferred using experience and judgement and it should be appreciated that actual conditions could vary from the assumed model.
- III. Subsurface conditions relevant to construction works should be assessed by contractors who can make their own interpretation of the factual data provided. They should perform any additional tests as necessary for their own purposes.
- IV. This Limitation should be read in conjunction with the Engineering NZ / ACENZ Standard Terms of Engagement.
- V. This report is not to be reproduced either wholly or in part without our prior written permission.

We trust that this information meets your current requirements. Please do not hesitate to contact the undersigned on (09) 972 2205 if you require any further information.

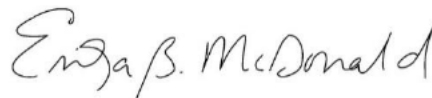
Report prepared by



**Jamie Rhodes**

Associate Environmental Engineer

Report reviewed by



**Erika McDonald, CMEngNZ**

Principal Environmental Engineer