ACID SULFATE SOIL ASSESSMENT AND REPORT

LOT 2 59 LUCAS ROAD EAST HILLS

Tuesday, 17 December 2024

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ACID SULFATE SOIL REPORT

DATE	17/12/2024
JOB NUMBER	103928FO
CLIENT	LOKA
LOCATION	LOT 2 59 LUCAS ROAD EAST HILLS

INTRODUCTION

Land that may contain acid sulfate soils have been identified from maps provided by the Development of Land and Water Conservation. These maps have been relied upon for an initial assessment and broadly establish different classes of land based upon the likelihood of acid sulfate soils being present.

Two boreholes and dynamic cone penetrometer tests were undertaken on the site. The subsurface conditions encountered were presented in field investigation reports compiled by our office. Representative soil samples were collected and laboratory tested for the presence of acid sulfate characteristics

pH 1:5	Is determined on soil samples after a 1:5 soil/deionized water leach. This method is compliant with National Environmental Protection (1999) schedule B(3) method 103. 'Guideline on laboratory analysis of potentially contaminated soils'
EC 1:5	Electrical conductivity is determined on soil samples using a 1:5 soil/deionized water leach. This method is compliant with NEP (1999) schedule B(3) method 104 measurements are conducted in deci siemens per meter
ECe	Electrical conductivity for 1:5 soil/deionized water is adjusted using an appropriate factors in accordance with Department of Land and Water Conservation DLWC (2002) 'site investigation for urban salinity' measurements are in deci siemens per meter.
Sulfate	Ions concentration in parts per million (ppm) determined from a 1 to 5 ratio soil water extract by use of spectrophotometer and colourimeter techniques.
1:5	Soil/water leach, 10 grams of soil are mixed with 50ml of deionized water and tumbled end over end for one hour. Water soluble salts are then leached from the soil by continuous suspension. Samples are settled and water filtered off for analysis

Details of the laboratory testing are summarized below and indicate, sample location, depth of sample collection, pH of soils sample, electrical conductivity etc

LABORATORY RESULTS

Sample	Depth meters	pH - 1:5	EC 1:5 dS/m	ECe dS/m	Exposure Classification
1	0.4	5.6	0.377	5.3	A2

RECOMMENDATION

In accordance with AS2870-2011 Residential Slabs and Footings Code, table 5.1 and 5-2, the appropriate concrete exposure classifications has been determined for the laboratory testing results obtained.

Reference to the Department of Land and Water Conservation ‘site investigations for urban salinity table 6.2 indicate that the soil samples are consistent with Moderately saline soils.

Yours Faithfully

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