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*The blue text provides guidelines on how to complete this document.*

*All blue text to be deleted when no longer needed, prior to finalising the project-specific document.*

Yellow Highlighted Text

Text highlighted in yellow shall be reviewed/completed. The highlighted areas are where project-specific information shall be added/deleted.

geotechnical Investigation- interpretive report

[SITE/Subtitle]

**Project Document Number: AA-AA###-####-AA-AAA-#####\_#**

**Revision Table**

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Urban Utilities Review By

Name & Position in Urban Utilities to whom document was issued for review.

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# Introduction

The introduction should describe reasons why the report was commissioned (such as a residential or industrial subdivision; external works, etc.) and broadly describe the contents of the report.

This report will include all geotechnical data and its interpretation by a RPEQ Geotechnical Engineer to the extent required to form the basis of design for the intended construction.

The recommendations within the geotechnical report will be relied upon for the design.

The RPEQ will verify the reliability, accuracy and adequacy of any existing information in relation to all ground conditions described in the report.

# Purpose

Describe the purpose of the geotechnical investigations - what type of construction is proposed, such as:

* Structures including buildings, retaining walls, bridging structures, thrust restraints, chambers etc.
* Pipelines (flexible or rigid)
* Trenched or trenchless construction
* Type of trenchless construction (microtunnelling only for sewers; microtunnelling or HDD for water mains

# Site Description

Describe the site including a locality plan and photos as necessary. Detailed drawings showing site test locations should be provided at Appendix 3.

# Known Geology

Describe the known regional and local geology for the site, taken from desk-top studies of geological maps and reports also covering mining activities, the water table, acid sulphate soils, etc. The depth of proposed infrastructure should be considered in this context.

# Geotechnical risks and hazards to be considered

Based on both desk-top studies and site investigation:

* detail the risks to safety, the environment, cultural heritage, and the proposed works for which this report has been commissioned that are relevant to the geological conditions; and
* detail any geotechnical hazards relevant to the site that should be considered by design engineers when designing the proposed works in relation to construction, commissioning, operation, maintenance and demolition of the works, including in relation to existing structures and other surface and buried infrastructure.
* clarify and compare the risks from various levels of geotechnical investigations.

For example, if the works are to be microtunnelled pipes, significant geotechnical risks could include:

* collapse and/or breakthrough of drilling fluids through soft and saturated alluvial soils;
* interference with existing underground utilities;
* creek crossings;
* shallow groundwater;
* construction in a waterway corridor;
* construction in flood prone areas;
* construction around existing structures;
* excavations through fill and geological boundaries; and/or.
* risks of ground heave and sink holes.

# Borehole location survey

Provide a general description of the engineering survey and refer to the appropriate appendix for mapping details.

# Field Investigations

Provide a general description of the field investigations followed by detailed descriptions, tables, lists, etc. of tests carried out; the rationale for the tests chosen and their numbers. Include Dial Before You Dig (DBYD) in field investigations.

# Field Test Results

Provide detailed field test results with any necessary comments relevant to the results obtained.

# Laboratory Testing

Provide a general description of the laboratory tests followed by detailed descriptions, tables, lists, etc. of tests carried out; the rationale for the tests chosen and their numbers.

# Remarks/Conclusions

The geotechnical consultant should provide a commentary on the investigation, including whether further testing is warranted and any concerns about the results of testing, limitations of investigations, etc.

# Interpretation of Results/Engineering Appraisal

Provide a detailed appraisal of the results of the investigation from an engineering perspective, including in relation to native soil and any filled areas and how the results will relate to the nature, location and depth of construction proposed for the site.

# Recommended detailed design criteria and features

Provide specific engineering design parameters for particular locations within the site relevant to the proposed nature and location of the works in tabular form, with explanations as necessary.

Recommendations should take account of whether any part of the site may be subject to immersion by flood waters.

# Recommended construction features and methodology

Provide specific engineering recommendations for particular locations within the site relevant to the construction of the proposed nature of the works with explanations as necessary.

For example:

* identify the suitability of materials from required excavation as site fill beside or under structures, with or without modification; and detail any required modification, if applicable; and
* identify construction issues and recommend construction methodologies.

# RPEQ certification

The Declaration below shall be included in the report and signed by the RPEQ certifying the report

I certify that the information included in this report is correct, reliable and adequate for the design and construction of the proposed works and that all testing and results have been certified by a NATA-registered laboratory.

|  |  |
| --- | --- |
| **RPEQ Name** |  |
| **RPEQ #** |  |
| **RPEQ Contact email** |  |
| **RPEQ Contact phone** |  |
| **Signature** |  |
| **Date** |  |

# Appendices

APPENDIX 1 –Geotechnical test types, numbers and locations tested

APPENDIX 2 –Survey locations of boreholes

APPENDIX 3 - Test Results and borehole logs

APPENDIX 3 – Boreholes overlaid on site plan

APPENDIX 4 - Borehole logs overlaid on longitudinal section, if pipelines form part of the works