

Monash University
Faculty of Engineering
Master of Professional Engineering
Civil Engineering Specialization
CIV5178 – Advanced Water Treatment

Wastewater Treatment Plant Design

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EXECUTIVE SUMMARY

Executive summary to be added here afterwards

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1 INTRODUCTION AND CONCEPTUAL DESIGN DESCRIPTION

Population and economical growth among other factors require the subsequently development of cities and the general infrastructure that supports them. As a cities expand, the electrical grid, road systems, drinking water and Wastewater recolection and treatment, among others, need to increase their capabilities as well. In the recent years, a northwest area in Melbourne has been rapidly developping and therefore, requires the construction of a new Wastewater treatment plant that can address the current and future needs of the community. In the presente report, the authors present the design of the abovementioned plant following local guidlines.

1.1 Population estimations

Based on current population surveys on the underdesign area, its current equivalent population (PE) from domestic contributions is equal to 340000. $PE_{\text{commercial}} = \lceil \sqrt{10} \times 9000 \rceil = 28461$

2 PRELIMINARY TREATMENT

3 PRIMARY TREATMENT

4 SECONDARY TREATMENT

5 ENVIRONMENTAL IMPACT ASSESSMENT

6 SUMMARY