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Date Plans Provided: 19/08/2021

STORM WATER MANAGEMENT PLAN

23 Kramer Street Werribee



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Plan: 1 of 5

S P E C C O

Sustainable Passive Energy Consultants

INTRODUCTION

SpecCO have been engaged to undertake a Storm Rating Report for the proposed development at 23 Kramer Street, Werribee.

This report includes an assessment of the proposed development, to determine the potential impacts as a result of stormwater runoff from the site during rainfall events. The report identifies a number of initiatives that will be implemented into the development to minimise these stormwater impacts. These initiatives are appropriate and practical for the site to ensure the proposed development meets the target water quality objectives required by the Wyndham City Council. .

The site has been assessed using the STORM Calculator. Melbourne Water has developed the STORM (Stormwater Treatment Objective – Relative Measure) Calculator to analyse the impacts of stormwater quality based on various treatment methods applied to a development. The STORM Calculator is able to display the amount of effective treatment that typical WSUD measures will provide in relation to best practice targets.

SITE DESCRIPTION

Address : 23 Kramer Street Werribee
Current condition : Single storey house
Local council : Wyndham City Council
Site area : 611 sqm

PROJECT DESCRIPTION

Proposed development : Proposed double storey town house with Garage at rear with access from Giles court

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STORMWATER MANAGEMENT SYSTEMS

The following section presents the stormwater management for the proposed development.

1. **Rainwater Tanks** (Rainwater tanks for toilet flushing)- For both existing and proposed dwellings

Rainwater tanks will be connected to both existing and proposed houses to capture stormwater running off the roof for reuse on the property. Once captured this water is generally used for watering gardens or for toilet flushing.

The size of the rainwater tank should be based upon the amount of use. The STORM calculator assumes the tank is connected to the toilet with a water use rate of 20 litres per person per day. For residential properties the number of bedrooms is used as a surrogate for the number of people using the tank. For industrial and commercial properties an estimate of the number of occupants using the building is required.

The supply reliability of a rainwater tank is directly influenced by;

Supply characteristics, Demand characteristics, Storage size

More detailed technical advice on the design on these systems can be found in the WSUD Engineering Procedures which can be purchased from www.publish.csiro.au

Recommendation:

The roof catchment of both existing and proposed dwellings to be diverted to a rainwater tank with a minimum total effective capacity of 3,000L.

2. **Buffer Strips - For existing driveway**

Buffer strips are vegetated strips that convey runoff from a hard surface to a downstream drainage system. Buffers are effective in removing coarse and medium sized sediment from stormwater.

Ensure levels are correct so that runoff can enter the buffer unimpeded.

Buffer strips are typically grassy areas although a range of species could be used.

More detailed technical advice on the design on these systems can be found in the WSUD Engineering Procedures which can be purchased from www.publish.csiro.au

Recommendation:

The runoff catchment of existing driveway to be diverted to a 2sqm buffer strip.

3. **Permeable Driveway- For proposed driveway**

Recommendation:

Proposed driveway to be permeable. Excluded from Storm rating report.

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STORMWATER ASSESSMENT RESULTS

The initiatives and areas described above have been applied to the STORM calculation for each dwelling and each dwelling has achieved a score of 109% or more.



STORM Rating Report

TransactionID: 1199043
Municipality: WYNDHAM (South West of Skeleton Creek)
Rainfall Station: WYNDHAM (South West of Skeleton Creek)
Address: 3 Kramer Street

Werribee
VIC 3030

Assessor: Tharakie Dona
Development Type: Residential - Multiunit
Allotment Site (m2): 611.00
STORM Rating %: 109

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
EX Built Area D1	145.60	Rainwater Tank	3,000.00	3	109.60	94.10
NEW Built Area D2	98.29	Rainwater Tank	3,000.00	3	139.00	91.40
EX Driveway D1	65.00	Buffer Strip	2.00	0	64.00	0.00

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CONCLUSION

With the proposed stormwater treatment measures incorporated into the development at 23 Kyrle Street Werribee; the design will achieve a score of 109% or more for minimum performance standards of the Wyndham City Council's planning scheme. The proposed development will incorporate rainwater tanks, and buffer strips for storm water treatment.

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