

Stormwater and Water Sensitive Urban Design (WSUD)

Darebin Council February 2021

Stormwater is surface run-off from rain and storm events that enters the drainage system. It carries many pollutants, including leaves, sediment, oil and other hydrocarbons, that are a major cause of pollution in our rivers, creeks, lakes and bays.

Water Sensitive Urban Design (WSUD) is vital for sustainable water management and improvement of water quality. It is best addressed at the planning permit stage to reduce pollution of waterways and stormwater flows to minimise the risk of flooding and damaging stormwater drains. Methods include installing water tanks connected to toilets, maximising permeable surfaces and filtering any remaining stormwater through rain gardens, bio-retention filters, tree pits, swales and proprietary in-ground filters.

As part of the planning permit application, large extensions and developments of 2 or more units are required to complete the Melbourne water STORM to demonstrate compliance with Clause 53.18 (Stormwater Management in Urban Development). Very large developments may need to use the e-Water MUSIC tool.

STORM tool- <http://storm.melbournewater.com.au/>

STORM tool help- <https://storm.melbournewater.com.au/help/calculator.asp>

MUSIC tool - <http://www.ewater.com.au/products/ewater-toolkit/urban-tools/music/>

Insite tool - <https://insitewater.com.au/>

STORM Checklist for Planning Applications

Applicants commonly fill out the STORM tool incorrectly. Below is a checklist for the STORM tool and information to be provided. Information on WSUUD features is provided on pages 3 – 6.

1. Check the STORM score is 100% or higher.	
2. Check the development site m2 listed in STORM matches the plans.	
3. Check the impervious area listed in STORM matches the plans. Include garages, carports, driveways, courtyards and paths connected to stormwater. Impervious areas need to be listed separately. Small paths and courtyards not connected to the stormwater system do not need to be included in STORM. Balconies, roof decks, driveways cannot be connected to water tanks connected to toilets due to the high level of pollution (unless further filtration is provided)	
4. Check the roof area can drain to the water tank in the proposed location. If not, separate roof areas might need to drain to water tanks and other areas to WSUD systems or the stormwater system. In general it is rare for a whole roof to be able to drain to a tank.	
5. Check the Tank Water Supply Reliability is a minimum of 80%.	
6. Check number of bedrooms listed in STORM matches the toilets serviced by the water tank/s on the plans and in the ESD report. An extra bedroom may be added for laundry connection.	
7. Check the rainwater tank and all WSUD features are clearly on the WSUD, landscape and ground floor plans. Ensure all the water tank and all WSUD features matches on the plans, ESD and BESS report.	

Sample of a STORM report



STORM Rating Report

TransactionID: [REDACTED]
 Municipality: DAREBIN
 Rainfall Station: DAREBIN
 Address: [REDACTED]
 RESERVOIR
 VIC 3073
 Assessor: [REDACTED]
 Development Type: Residential - Multiunit
 Allotment Site (m2): 688.60
 STORM Rating %: 100

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
U1 ROOF TO TANK	68.00	Rainwater Tank	2,000.00	3	163.60	82.00
U1 UNTREATED	29.00	Raingarden 100mm	1.00	0	132.00	0.00
U2 ROOF TO TANK	54.00	Rainwater Tank	2,000.00	3	170.00	82.00
U2 UNTREATED	33.00	None	0.00	0	0.00	0.00
U3 ROOF TO TANK	47.00	Rainwater Tank	2,000.00	3	170.00	82.00
U3 UNTREATED	36.00	None	0.00	0	0.00	0.00
DRIVEWAY TO RAINGARDEN	105.00	Raingarden 100mm	1.00	0	110.80	0.00
DRIVEWAY UNTREATED	67.00	None	0.00	0	0.00	0.00

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Sample of a WSUD plan clearly showing where all impervious areas drain

