

Water Sensitive Urban Design

11 Bruce Street, Bell Park

25th June 2026

Admin@msconsultants.com.au

**Melbourne
Sustainability
Consultants.**

This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987.

The document must not be used for any purpose which may breach copyright legislation

Table of Contents

Introduction & Council’s Requirements.....3

Site & Proposed Development Description 4

WSUD Assessment Tool..... 4

Summary of Initiatives.....5

1. Stormwater Quality Management Strategies & Site Demarcation.....6

2. WSUD Catchment Plan.....7

3. WSUD Assessment Results.....9

4. Proposed Treatment Typical Cross-Section.....16

5. Stormwater Management During Construction.....17

Appendix 1 – WSUD Maintenance Manual.....18

This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987.
The document must not be used for any purpose which may breach copyright legislation

Document History

Version	Date	Status	Author	Approved
0	01/06/2026	First Issue		
1	25/06/2026	Update the report as per RFI's request		

IP and Copyright Disclaimer

This report is protected by Australian copyright law and is the property of MSC. The information contained in this report is intended for the sole use of MSC’s client and is not to be shared or distributed to any third party without prior written permission from MSC.

This document, including all content, materials, and information contained herein, is the intellectual property of MSC and is protected by Australian intellectual property laws, including copyright and trademark.

Introduction & Council's Requirements

Melbourne Sustainability Consultants has been commissioned to provide guidance on achieving stormwater quality objective for the proposed development located at 11 Bruce Street, Bell Park.

The assessment is being carried out in compliance with Greater Geelong City Council's requirements specifically addressing the stormwater quality part of Planning Policy Clause 55.05-1 Standard B5-1 *Permeability and Stormwater Management Objective*.

Clause 55.05-1 Standard B5-1 outlines the following objectives:

- To meet the best practice water quality performance objectives for stormwater quality specified in the Urban stormwater management guidance (EPA Publication 1739.1, 2021):
 - Suspended Solids - 80% retention of typical urban annual load
 - Total Nitrogen - 45% retention of typical urban annual load
 - Total Phosphorus - 45% retention of typical urban annual load
 - Litter - 70% reduction of typical urban annual load
- To encourage stormwater management that maximises the retention and reuse of stormwater.
- To encourage development that reduces the impact of stormwater on the drainage system and filters sediment and waste from stormwater prior to discharge from the site.
- To encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces.

The 612.11m² site is located at 11 Bruce Street, Bell Park within Greater Geelong local authority. The site currently contains residential buildings as shown in the image below:



The proposed development is comprised of three townhouse (3x 2-bedroom). A common driveway is proposed to access all. Each unit will have access to a garage.

BLUE FACTOR

The BLUE FACTOR calculator is a tool developed by The Department of Energy, Environment and Climate Action (DEECA) and Microburst Software to assist with the design and assessment of stormwater management systems. The calculator enables users to determine the effectiveness of stormwater treatment measures in removing pollutants from stormwater runoff, thereby protecting waterways and aquatic ecosystems. Blue Factor is the successor to STORM and can already be used to replace it as an accepted tool.

MSC6932

Summary of Initiatives

Initiatives listed below should be reflected on TP drawings either graphically on the plan (e.g. bike spaces, RWT etc.) or with a clear note. All WSUD initiatives listed in the report should be clearly noted on drawings including all areas diverting to the proposed treatment (e.g. RWT, raingarden etc.).

Category	Requirement
Stormwater	A minimum of 88sqm of part of the driveway is to be treated as permeable paving
	The entire roof runoff from Unit 1 and part of the roof runoff from Unit 2 & 3 will be diverted into a 2,000L tank for each unit – Water to be used for toilet flushing, irrigation and laundry – Cutter guard, first-flush and filter installed for laundry reuse

1. Stormwater Quality Management Strategies & Site Demarcation

To achieve stormwater management objectives, it will be necessary to put in place stormwater treatment measures. The upcoming section outlines the surfaces that necessitate treatment and the specific treatment required. Effective management of stormwater flows in the building area will be crucial for the building's overall performance and its ability to meet stormwater management goals.

The development was evaluated using the BLUE FACTOR tool, a widely accepted tool in the industry, to verify compliance with the aforementioned best practice targets. To meet the required standards, the development must attain a minimum compliance score of 100%.

The total site area for the WSUD assessment is 612.11m². The following treatment will be implemented on-site:

Surface	Treatment	Area	Description
Roof Unit 1	Rainwater Tank	92.2m ²	The entire roof runoff will be diverted into a 2,000L rainwater tank. The rainwater will be used for toilet flushing, irrigation and laundry. Rainwater collection might require the implementation of a charged pipe system that <u>cannot be running underneath the building footprint</u>.
Roof Unit 2	Rainwater Tank	46.5m ²	Part of the roof runoff will be diverted into a 2,000L rainwater tank. The rainwater will be used for toilet flushing, irrigation and laundry. Rainwater collection might require the implementation of a charged pipe system that <u>cannot be running underneath the building footprint</u>.
Roof Unit 3	Rainwater Tank	84.8m ²	Part of the roof runoff will be diverted into a 2,000L rainwater tank. The rainwater will be used for toilet flushing, irrigation and laundry. Rainwater collection might require the implementation of a charged pipe system that <u>cannot be running underneath the building footprint</u>.

Driveway	Permeable Paving	88m ²	Part of the exposed driveway will be constructed with permeable material reducing the overall stormwater outflows.
Permeable Areas	No treatment	208m ²	Part of the site will be designed as permeable. This will include landscaped and walkway area.
Untreated Areas	No treatment	92.6m ²	Impervious areas include the remaining of roof and driveway areas. Part of the site will be left untreated before being released at the legal point of discharge.

The development has prioritized maximizing permeable areas, resulting in decreased stormwater outflows from the site. Additionally, the proposed development includes vegetated areas, which not only reduces the heat island effect but also improves the local habitat.

2. WSUD Catchment Plan

Please refer to the next page for the full WSUD catchment plan including all treatment and areas included above.

NOTE:
Builder must verify all dimensions and levels on site prior to the order or placement of any water or drainage infrastructure.
Copyright of this document including all associated materials either written, design, specification and drawing is vested in Tony Preiato & Associates.

date commenced: XX / XX / 2020
date first issued:

rev	date	drw	chk	description

PROPOSED AREA SCHEDULE

UNIT 1 (Lot 1 - 00m2)		
Ground Floor	00.00 m²	0.00 sq
First Floor	00.00 m²	0.00 sq
Porch	00.00 m²	0.00 sq
Garage	00.00 m²	0.00 sq
SUB TOTAL AREA	00.00 m²	00.00 sq
UNIT 2 (Lot 2 - 00m2)		
Ground Floor	00.00 m²	0.00 sq
First Floor	00.00 m²	0.00 sq
Porch	00.00 m²	0.00 sq
Garage	00.00 m²	0.00 sq
SUB TOTAL AREA	00.00 m²	00.00 sq
TOTAL BUILDING AREA	00.00 m²	00.00 sq
Site Area	00.00 m²	
Site Coverage (60% max.)	00.00 m²	00.0 %
Permeability (20% min.)	00.00 m²	00.0 %
Garden Area (00% min.)	00.00 m²	00.0 %
Common Property	00.0 m²	

PRELIMINARY
not to be used for construction

client approval signature:

stage:

PLANNING

designed by:
suite 3/133 SHANNON AVE
MANIFOLD HEIGHTS VIC 3218
PH: 5221 6613
FAX: 5221 6614
e mail: tonypreiato@pipeline.com.au

tonypreiato
ASSOCIATES
building designers

project:

UNIT DEVELOPMENT

site address:

11 BRUCE STREET
BELL PARK

client:

drawing title:

TITLE

	date:	drawn:	TPP
	25/ 50/ 2020	checked:	TP
	scale:	sheet no:	01 of **
	SCALE		

file no:

221904

rev no:

-

MSUD Legend

- Roof Catchment
- Permeable Paving
- Permeable Areas

ROOF PLAN
SCALE 1:140

- POTENTIAL SOLAR PANEL LOCATION
- AREA INCLUSION AS PER CLAUSE 55.05-3 B5-3

SOLAR PANEL PLAN
SCALE 1:100

3. WSUD Assessment Results

By identifying the impervious surfaces within the site and implementing treatments to mitigate the impacts of stormwater leaving the site, the proposed development has successfully fulfilled the objectives listed in the introduction.

All treatment measures and associated areas described above have been input into the BLUE FACTOR tool and the following results have been achieved:

Please note that mean annual runoff volume infiltrated cannot be achieved in Blue Factor since permeable areas (where water could infiltrate) are not considered in the calculation. Permeable areas are only input in catchment to demonstrated that all areas on site have been accounted for. This was confirmed by blue Factor developer.

TSS and has not achieved full compliance as it is difficult to achieve compliance with these requirements on these types of projects where TSS pollutant is already low. Reducing significantly the level of something that is already very low is complicated. This is in line with DEECA's position.

Project # 5ACBC744
V2: 11 Bruce Street, Bell Park
Denis Mallet - denis@msconsultants.com.au
11 Bruce St, Bell Park VIC 3215
25 June 2026 10:21 a.m.



11 Bruce Street, Bell Park

The proposed stormwater treatments provide 'deemed to comply' compliance with the minimum planning requirement for total nitrogen but does not comply with all the relevant objectives for management of stormwater flows on-site.



Project details

Name	V2: 11 Bruce Street, Bell Park
Project ID	5ACBC744
Street address	11 Bruce St, Bell Park VIC 3215
Municipality	Greater Geelong
Site area	612.11 m ²
Planning Number	

Flow and pollutant load reductions

Item	Result	Target
Mean annual runoff volume harvested or evapotranspired (%)	58%	>32%
Mean annual runoff volume infiltrated or filtered (%)	0%	>3%
Total suspended solids (%)	62%	>80%
Total phosphorus (%)	61%	>45%
Total nitrogen (%)	58%	>45%
Total gross pollutants (%)	70%	>70%

Configuration 1



Roof unit 1 92.2m2



Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 2

Configuration 2



Roof unit 2 46.5m2



Rainwater Tank 2
Rainwater tank retention volume in kilolitres: 2

Configuration 3



Roof unit 3 84.8m2



Rainwater Tank 3
Rainwater tank retention volume in kilolitres: 2

Catchments



Roof unit 1 92.2m2



Roof unit 2 46.5m2



Roof unit 3 84.8m2



Permeable Areas Pervious (garden and lawn), 208m2



Untreated Impervious Areas Paved, 92.6m2



Permeable Paving Pervious (garden and lawn), 88m2

Treatments



Rainwater Tank 1

Rainwater tank retention volume in kilolitres: 2

174%



Rainwater Tank 2

Rainwater tank retention volume in kilolitres: 2

214%



Rainwater Tank 3

Rainwater tank retention volume in kilolitres: 2

180%



Unit 1 Residential Townhouse, 2 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	1
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• Mains	0 m ²
• Rainwater Tank	0 m ²
• Recycled Water	0 m ²
Garden water use efficiency	



Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	1
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• Mains	0 m ²
• Rainwater Tank	0 m ²
• Recycled Water	0 m ²
Garden water use efficiency	



Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	1
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• Mains	0 m ²
• Rainwater Tank	0 m ²
• Recycled Water	0 m ²
Garden water use efficiency	

This section will include a typical cross-section of all WSUD treatments proposed in the development.

Stormwater to stormwater connection point

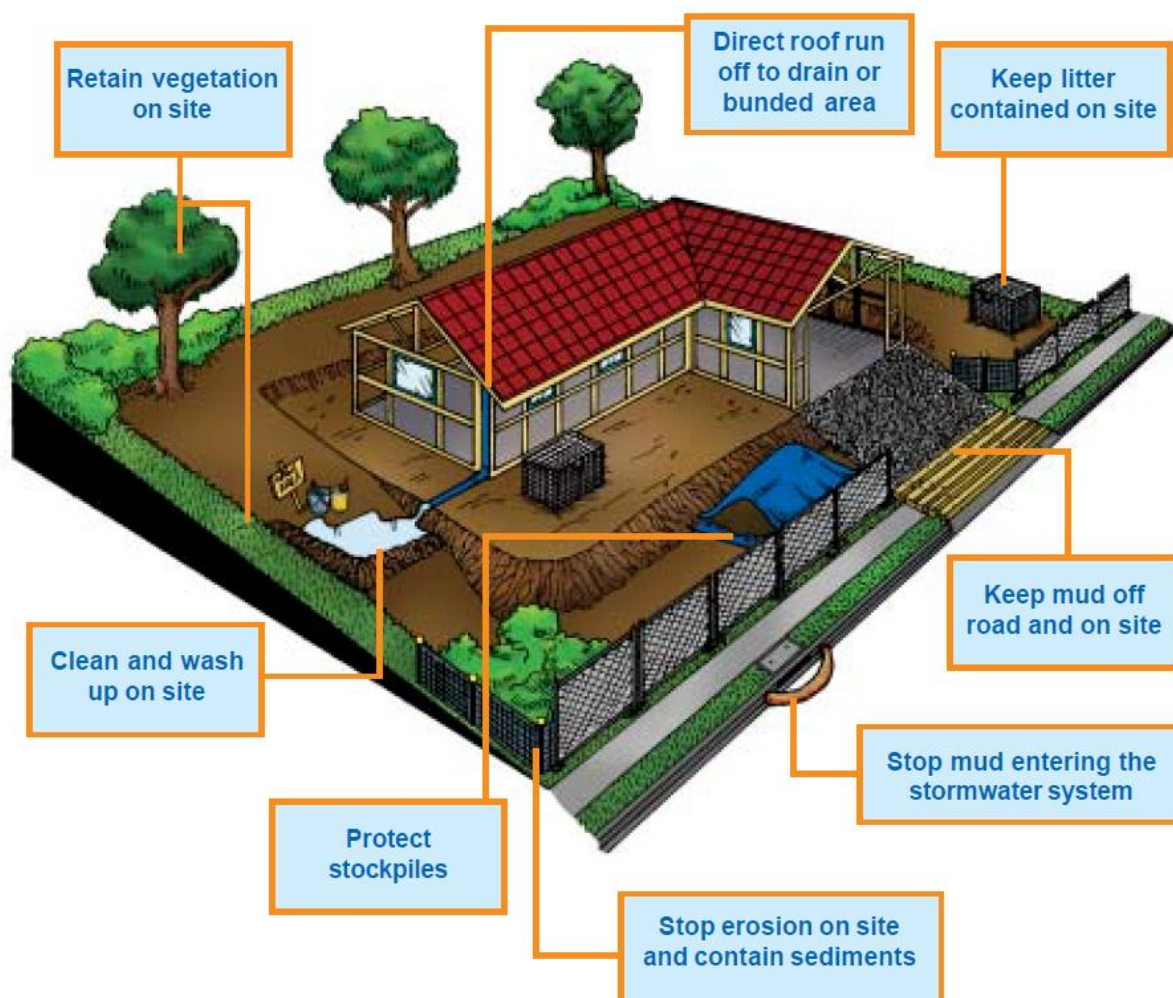
b. Permeable Paving



5. Stormwater Management During Construction

To prevent contamination of stormwater discharge and to decrease the speed of flows produced during construction, steps will be taken to manage stormwater. These measures will involve establishing buffer strips and maintaining a clean site by removing loose rubbish. "[Keeping Our Stormwater Clean - A Builder's Guide](#)" by Melbourne Water provides additional information. The objectives depicted in the diagram below illustrate ways to minimise the effects of stormwater runoff during the construction phase.

Check Council requirements and plan before you start work on site





Appendix 1 – WSUD Maintenance Manual

WSUD manuals are sourced from the City of Port Philip which has developed a detailed manual for the majority of treatment systems.



Maintenance manual

Rainwater tanks

Site address: _____

Planning permit number: _____

Rainwater tank maintenance

This manual lists the key tasks required to maintain a domestic rainwater tank and the recommended frequency of each task. This manual can be submitted with planning permit applications for developments that include the installation of a domestic rainwater tank. Once endorsed, the property owner is responsible for continuous implementation of rainwater tank maintenance, in accordance with the guidance in this manual.

Rainwater tanks are an exceptional tool for environmental protection. They collect and store roofwater for use inside and outside the home. This simultaneously reduces the demand on our precious potable mains water and limits the amount of stormwater pollutants that enter our sensitive Bay.

Maintenance of rainwater tanks is relatively easy however it is important to do the following key tasks to ensure the quality of water is high:

- stop leaf litter and debris entering the tank.
- prevent bird droppings and dust building up in the gutters.
- prevent mosquitos and other animals entering the tank.

Tank connected to	toilet only ☐ toilet & irrigation ☐ toilet & laundry & irrigation ☐ toilet & laundry & hot water & irrigation ☐
Rainwater tank location	
Planning drawing number showing rainwater tank location	
Rainwater tank construction date	
Date of final building inspection	
Tank volume (litres)	
Area or percentage of the roof that is connected to the tank via gutters and downpipes	

Tips for undertaking maintenance

Things to look for and how to fix them.

Leaf litter / debris in gutters	Pump not working
Regularly clear your gutters. Make sure you cover the tank inlet if you're rinsing down the gutters to avoid debris entering the tank.	Check operating instructions for your pump. Check that pumps are kept clear of surface water (flooding), vegetation, and have adequate ventilation. Pumps should be serviced every few years to prolong the pump life.
Blocked downpipe	Mains backup or pump not working
If you see water spilling from the edge of the gutters check that the downpipe is not blocked, removing any debris.	Have you heard the pump operating? If the mains backup switching device fails many people do not notice for a long time. Consider a manual system if the switching device is problematic and you don't mind operating it manually.
First flush diverter clogging	Overflow
To clean out, unscrew the cap at the base of the diverter and remove the filter. Wash the filter with clean water and the flow restrictor inside the cap.	Check that the overflow is not blocked and that there is a clear path for water to safely spill from the tank through the overflow pipe when full. Check that a clean mesh screen is safely in place to prevent mosquitoes entering the tank.
Debris on the mesh cover over inlets / outlets	Sediment / debris build-up in tank (more than 20mm thick)
The fine stainless steel mesh is similar to fly screen mesh. It should be cleaned regularly to ensure it does not become blocked with leaves and other material.	Over time a small amount of fine sediment will collect in the bottom of your tank and this is harmless and natural. It should not be disturbed until it is approx 20 mm thick which may take many years. To clean your tank out simply empty your tank and wash out with a high-pressure washer or hose.
Dirt and debris around the tank base or side.	Base area
Keep leaf build-up, sticks, pot plants and other items off the lid of your tank. Use a hose to remove dust and dirt from the outside of the rainwater tank and ensure there is no debris on the base, bottom lip and walls of your tank.	Tanks must be fully supported by a flat and level base. Check for any movement, cracks or damage to the slab or pavers. If damage is observed, empty the tank to remove the weight and have the fault corrected to prevent damage to the tank. There is no warranty from suppliers for damage to a rainwater tank if the base has failed.
Smelly water or mosquitos	Monitoring the water level
Rainwater tanks can smell if there is debris in the gutters. Check the gutters and leaf strainers are clean. Mosquitos or wrigglers can make their way into your tank if they are small enough to pass through the inlet strainer. A very small amount of chlorine (approx 4 parts per million) can be put in the tank to kill off mosquitos or the bacteria causing odours. The chlorine will disinfect the water and then evaporate. Chlorine tablets from a pool supplier can be used (but check the recommended dose based on your tank capacity).	A range of devices are available to monitor water level. Some simple float systems can be used effectively.

Acknowledgement: Information from PJT Green Plumbing's 'Maintenance Guide for Your Rainwater Tank' was used to develop this fact sheet.

For more information please visit www.portphillip.vic.gov.au or contact the Sustainability team via:

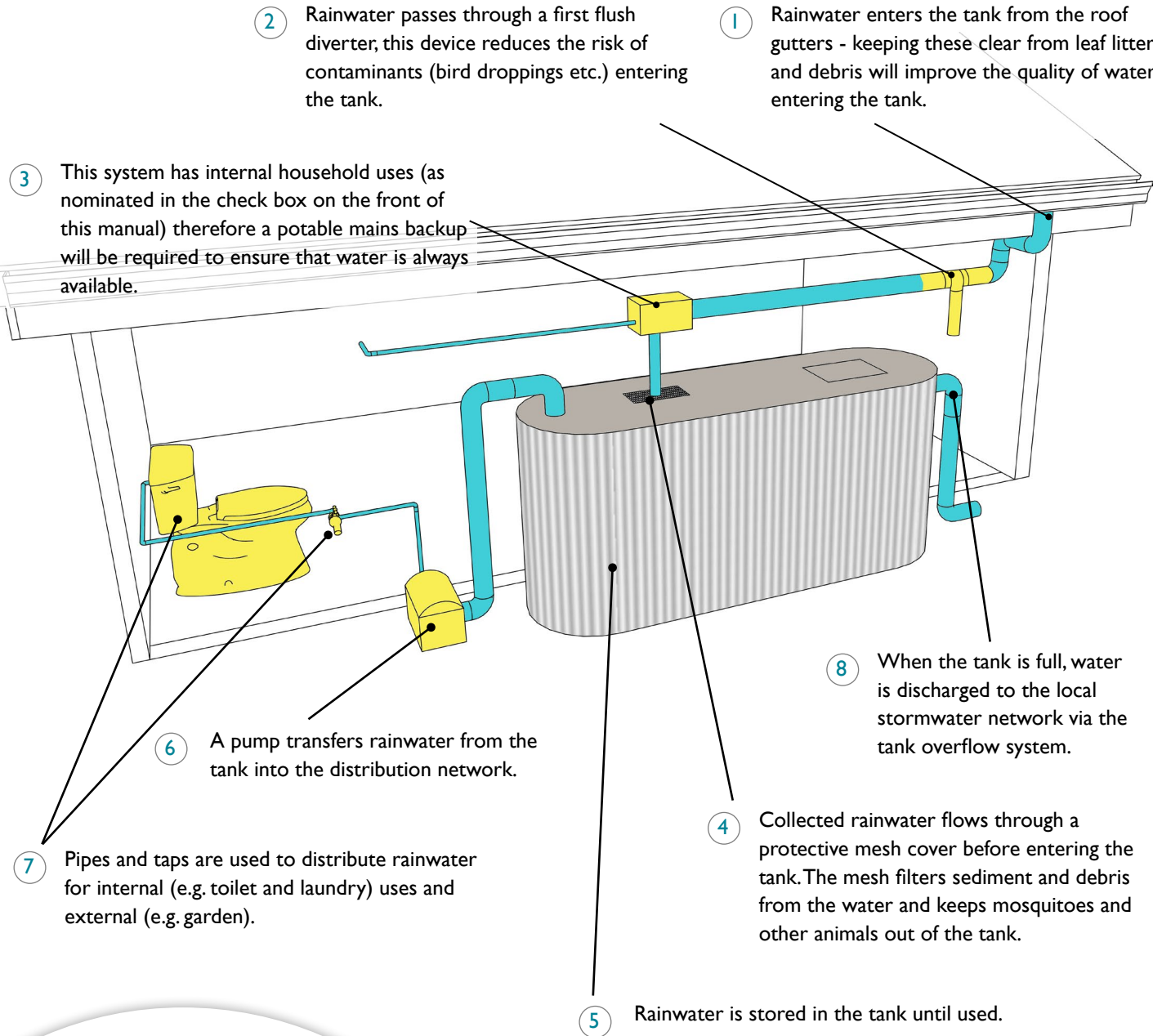
Phone: 03 9209 6777
email: sustainabledesign@portphillip.vic.gov.au



Maintenance Overview

Rainwater Tank Maintenance

The following diagram identifies the key items which are important for rainwater tanks and their maintenance.



Maintenance Checklist

The property owner is responsible for checking the maintenance items in this checklist at the recommended frequency at the bottom of the table. The maintenance log at the bottom of the page should be filled in once each maintenance check is complete. Upkeep of this maintenance log should continue throughout the life of the rainwater tank.

Item	Rainwater tank element	Inspection item	Y/N	Likely maintenance task
1	Roof gutters and downpipes	Is there leaf litter or debris in the gutters?		Remove by hand and dispose responsibly.
2	First flush diverter	Is there anything blocking the first flush diverter (leaves etc)?		Remove by hand and dispose responsibly.
3	Potable mains back up device	Is the potable mains back up switch operating correctly?		Repair or replace device. Consider a manual switching device.
4	Mesh cover	Has the mesh cover deteriorated or have any holes in it?		Replace mesh cover.
5	Tank volume	Is there large amounts of sediment or debris sitting in the bottom of the tank, reducing the volume available in the tank to store water?		Remove sediment and dispose responsibly.
6	Pump	Is the pump working effectively? Have you heard it on a regular basis?		Check the potable mains back up is not permanently on. Repair or replace pump.
7	Pipes and taps	Are pipes and taps leaking?		Repair as needed.
8	Overflow	Is the overflow clear and connected to the stormwater network?		Remove blockages and/or restore connections to stormwater network.
9	Supporting base	Are there any cracks or movement of pavers?		Empty the tank to reduce weight then repair any damage to the base.

Maintenance frequency

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All tasks	x			x			x			x		

Regular maintenance will improve the water quality and extend the life of your system. A well maintained tank isn't likely to need to be cleaned out for up to ten years (when there is more than 20mm of accumulated sediment).

Maintenance Log

Maintenance date	Maintenance undertaken



Tips for undertaking maintenance

Things to look for and how to fix them.

Uneven surface /damaged sub-grade material	Water ponding on the pavement /blocked pavements
An uneven paving surface can result from the sub-grade material failing to provide an even base (from frequent wetting and drying). The paving and sub-grade material may need to be reset. Consider installing an impermeable liner (e.g. geotextile) below the drainage layer to prevent wetting and drying of the sub-grade. Issues for normal paving (like tree roots) may also be relevant.	Water ponding on porous pavements may be a result of sediment blocking the pavers. Remove any visible sediment build up by vacuum sweeping or using a broom. Dispose of sediment in nearby grassed areas or garden beds. Refill joint between pavers if required. Care needs to be taken with high pressure hoses as they can cause damage to loose material in the joints and sub-grade. In some cases resetting the pavers with thorough cleaning of accumulated sediment may be necessary.
Rubbish, leaf litter or sediment	Scour or erosion of joint material
It is important not to let sediment accumulate as it will block pavers or sub-grade material. Use a broom or high pressure hose as appropriate to remove and dispose responsibly. Care needs to be taken with high pressure hoses as they can cause damage to loose material in the joints and subgrade.	Erosion (particularly between the pavers) may result if water is concentrated in one spot (e.g. near a down pipe or point where water flows onto the porous paving or is concentrated by uneven surfaces). It may be necessary to re-profile the surface, resetting the gravel or material around pavers, adding more joint and drainage layer material.
Boggy soils caused by water not being able to drain from the site	Blocked underdrainage
Water should be moving through the pavers/joints to the sand/gravel drainage layer and into the subgrade material. Boggy soils may occur if an underdrain is blocked or is needed (if not initially installed). If an underdrain has been installed, lift the pavers to check for blockages. If an underdrain isn't present check for clogging of pavement and consider installing an underdrain if the problem persists.	Underdrainage is provided to collect the water moving through the pavers and direct it to the stormwater network. Often an inspection pit is provided so you can check that water is flowing in the underdrain following rainfall. If there is no water flowing, lift the pavers to check for blockages.

Porous pavement

Porous pavement can be created with traditional masonry tiles that have a porous jointing material between the tiles. The jointing material is often loose and not robust like typical grouting material – but it plays an important role in allowing the water to move through to the ground below. Care needs to be taken to not cause damage with high pressure hoses. It is important to sweep, top up joint material and occasionally reset the pavers to maintain an even surface.



Permeable pavement

Permeable pavement describes tiles that have been designed to allow water through (i.e. the tiles are porous). The permeable pavement can be laid with more robust grouting material. This means that a high pressure hose can be used to clean the pavers (although in some cases this may drive dirt further into the pores of the paver). Cleaning dust and dirt from the tile surfaces with a broom or vacuum sweeper will reduce clogging of open pores in the tiles, extending the functional life of the pavement.



Maintenance manual

Porous pavements

Site address: _____

Planning permit number: _____

Porous pavement maintenance

This manual lists the key tasks required to maintain porous pavement and the recommended frequency of each task. This manual can be submitted with planning permit applications for developments that include the installation of a domestic porous pavement. Once endorsed, the property owner is responsible for continuous implementation of porous pavement maintenance, in accordance with the guidance in this manual.

Porous pavements allow water to drain through the pavement surface and seep into the ground below. This benefits vegetation by improving access to air and water. It also helps the environment by reducing the amount of stormwater runoff and pollutants that enter the Bay.

Porous pavements can be constructed with loose gravel, structural gravel, structural grass, masonry pavers or engineered pavers. It is important to include a layer of sand or gravel under the porous pavers to improve drainage. In areas where soils have poor drainage (e.g. heavy clays) an underdrain may be needed under the drainage layer. In the City of Port Phillip soils are typically sandy and well drained so underdrains are often not required. However, this must be confirmed on a site by site basis.

Maintenance should focus on keeping the pavement porous so that water can continue to soak through it.

Porous pavement location	
Planning drawing number showing porous pavement location	
Porous pavement construction date	
Date of final building inspection	
Area of porous pavement (m ²)	
Area of catchment (m ²) (e.g. paving and/or roof) directed to the porous pavement (this will include the area of the pavement itself)	

For more information please visit www.portphillip.vic.gov.au or contact the Sustainability team via:

Phone: 03 9209 6777

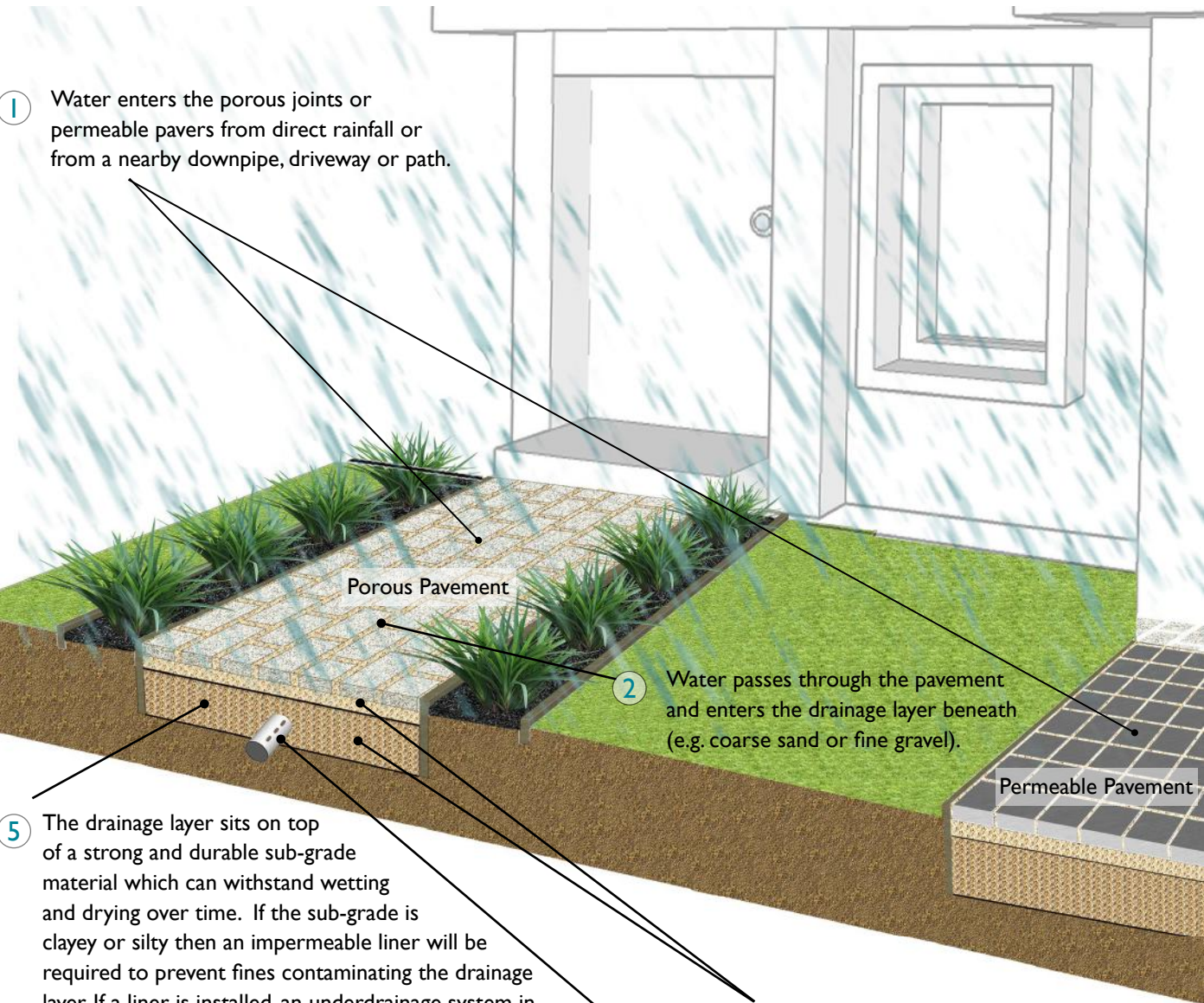
email: sustainabledesign@portphillip.vic.gov.au



Maintenance Overview

Porous Pavement Maintenance

The following diagram identifies the key items which are important for permeable pavements and their maintenance.



1 Water enters the porous joints or permeable pavers from direct rainfall or from a nearby downpipe, driveway or path.

2 Water passes through the pavement and enters the drainage layer beneath (e.g. coarse sand or fine gravel).

5 The drainage layer sits on top of a strong and durable sub-grade material which can withstand wetting and drying over time. If the sub-grade is clayey or silty then an impermeable liner will be required to prevent fines contaminating the drainage layer. If a liner is installed, an underdrainage system in the drainage layer will also be required.

4 An underdrainage system may be included in the drainage layer to collect water and transfer it into the local stormwater network.

3 The permeable pavers sit on a 50mm deep bedding layer, below the bedding layer is a 200mm deep drainage layer. Typically coarse sand or fine gravel (2 – 5 mm) is suitable for both layers as it provides acceptable drainage and strength. If finer material is used for the bedding layer (or in the joints) a layer of filter material will be required to prevent fines from the bedding layer contaminating the drainage layer below.

Maintenance Checklist

The property owner is responsible for checking the maintenance items in this checklist at the recommended frequency at the bottom of the table. The maintenance log at the bottom of the page should be filled in once each maintenance check is complete. Upkeep of this maintenance log should continue throughout the life of the porous paving.

Item	Poros pavement element	Inspection item	Y/N	Likely maintenance task
1	Inflow to porous joints and/or permeable pavers	Has the material in the joints or drianage layer been eroded away or displaced by concentrated water flow?		Re-profile the surface with hand tools and top up joint and drainage layer material.
		Is there rubbish, leaf litter or sediment blocking the inflows?		Remove by hand and dispose responsibly.
2	Blocked pavement	Is water ponding and not draining through the pavement?		Remove sediment build up by vacuum sweeping or manually sweeping. Once removed, dispose of sediment in nearby grassed areas or garden beds.
		Is there unwanted vegetation in the pavement?		
3	Soggy and boggy soils	Is water not draining away from the area creating boggy and wet areas?		Ensure that the bedding and drainage layers contain appropriate material and haven't become blocked by fines/sediment. Replace this material as needed. If the problem persists consider installing an underdrain to enhance drainage. If an underdrain has been installed lift the pavers to check for blockages.
4	Underdrainage (if required)	Does water in the underdrain enter the local stormwater network after a storm?		Use an inspection pit (if available) to ensure that water is flowing in the underdrain following rainfall. If there is no water flowing lift the pavers and check for blockages.
5	Uneven pavements	Is the sub-grade material failing causing pavement to move and become uneven?		Consider installing an impermeable liner (e.g. geotextile) below the drainage layer to prevent wetting and drying of the sub-grade.

Maintenance frequency

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
x			x			x			x		

+ after heavy rainfall

Maintenance Log

Maintenance date	Maintenance undertaken

