

Cellular Tanks Operation & Maintenance Requirements

Regular inspection and maintenance is required to ensure the effective long-term operation of below ground modular storage systems.

Specific maintenance needs of the system should be monitored, and maintenance schedules adjusted to suit requirements.

Modular systems – operation and maintenance requirements

Maintenance schedule	Required action	Recommended Frequency
Regular maintenance	Inspect and indentify any areas that are not operating correctly. If required, take remedial action	Monthly for three months then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae, or other matter; remove and replace surface infiltration medium as necessary	Annually
	Remove sediment from pretreatment structures and/or internal forebays	Annually, or as required
Remedial actions	Repair/rehabilitate inlets, outlets, overflows, and vents	As required
Monitoring	Inspect/check all inlets, outlets, overflows, and vents to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment buildup and remove if necessary	Every five years or as required

Maintenance activities should be detailed in the health and safety plan and a risk assessment should be undertaken.

Orifice Plate Flow Control Maintenance Requirements

Regular inspection and maintenance are required to ensure the effective long-term operation of flow control systems

Specific maintenance needs of the system should be monitored, and maintenance schedules adjusted to suit requirements.

Flow control – operation and maintenance requirements

Maintenance schedule	Required action	Recommended Frequency
Project completion	Following installation of the Flow Control it is vitally important that any extraneous material i.e. building materials are removed from the unit and the chamber.	On completion of the project by the contractor
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly then annually
	Debris removal from chamber (where may cause risks to performance)	As required during inspections
	Remove sediment	Annually, or as required
Remedial actions	Repair / replace flow control if damaged	As required
Monitoring	Inspect/check to ensure that they are in good condition and operating as designed	Annually and after large storms

Maintenance activities should be detailed in the health and safety plan and a risk assessment should be undertaken.

Permeable Asphalt Paving Operation & Maintenance Requirements

Regular inspection and maintenance is important for the effective operation of pervious pavements. The facility should be inspected regularly, preferably during and after heavy rainfall to check effective operation and to identify any areas of ponding.

Pervious surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capability. Manufacturers' recommendations should always be followed.

A brush cleaner, which can be a lorry-mounted device or a smaller precinct sweeper, should be used and the sweeping regime should be as follows:

1. End of winter (April) – to collect winter debris.
2. Mid-summer (July/August) – to collect dust, flower and grass-type deposits.
3. After autumn leaf fall (November).

The reconstruction of failed areas: Materials removed from the layers below the surface may contain heavy metals and hydrocarbons and may need to be disposed of as controlled waste. Sediment testing should be carried out before disposal to confirm its classification and appropriate disposal methods.

Pervious pavement operation and maintenance requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Brushing	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilize and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48hrs after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually

Maintenance schedule	Required action	Frequency
Monitoring	Monitor inspection chambers	Annually

Maintenance activities should be detailed in the Health and Safety Plan and a risk assessment should be undertaken.

Permeable Paving Operation & Maintenance Requirements

Regular inspection and maintenance is important for the effective operation of pervious pavements. The facility should be inspected regularly, preferably during and after heavy rainfall to check effective operation and to identify any areas of ponding.

Pervious surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capability. Manufacturers' recommendations should always be followed.

A brush cleaner, which can be a lorry-mounted device or a smaller precinct sweeper, should be used and the sweeping regime should be as follows:

1. End of winter (April) – to collect winter debris.
2. Mid-summer (July/August) – to collect dust, flower and grass-type deposits.
3. After autumn leaf fall (November).

Care should be taken in using vacuuming equipment to avoid removal of jointing material. Any lost material should be replaced.

If reconstruction is necessary, the following procedure should be followed:

1. Lift surface layer and laying course.
2. Remove any geo-textile filter layer.
3. Inspect sub-base and remove, and replace if required.
4. Renew any geo-textile layers.
5. Renew laying course, jointing material and concrete block paving.

The reconstruction of failed areas of concrete block pavement should be less costly and disruptive than the rehabilitation of continuous concrete or asphalt porous surfaces due to the reduced area that is likely to be affected. Materials removed from the voids or the layers below the surface may contain heavy metals and hydrocarbons and may need to be disposed of as controlled waste. Sediment testing should be carried out before disposal to confirm its classification and appropriate disposal methods.

Pervious pavement operation and maintenance requirements

Maintenance schedule	Required action	Frequency
Regular maintenance	Brushing	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilize and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying	As required – once per year or less frequently used pavements

Maintenance schedule	Required action	Frequency
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required
	Remedial work to any depressions, rutting, and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every ten to fifteen years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48hrs after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Maintenance activities should be detailed in the Health and Safety Plan and a risk assessment should be undertaken.