



Q-Guard™ Stormwater Treatment Device

Maintenance Manual



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Q-Guard™ ULTRA
STORMWATER TECHNOLOGY

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1 SCOPE

Q Guard™ Units are stormwater treatment devices

This guide applies to inspections and “clean-outs” of **Q Guard™** ULTRA units.

The technology of **Q Guard™** units allows for the trapping, and storing for the controlled removal, of pollutants from stormwater runoff within a piped system. These pollutants include free oils, grease, sediment and aggregates, as well as litter and organic matter (ie gross pollutants). This technology has been developed in Australia, and for Australian conditions and has been subjected to laboratory testing. This involved the testing of full scale and very large scale models.

Further technical information is available at the following link
<http://www.jameshardiepipes.com.au/q-guard-gross-pollutant-traps.html>.

2 INSPECTIONS

2.1 GENERAL

It is not necessary to enter the Chamber to undertake these inspections. However, prior to any entry into the Chamber, all Workplace Health and Safety regulations and other statutory requirements should be strictly adhered to

The volumes of pollutants trapped for removal from individual **Q Guard™** ULTRA units will be dependent on the characteristics of the particular catchment area(s), the number and intensity of rainfall events since the previous clean-out and abnormal events such as oil spills. As such, regular inspections should be undertaken to determine the need for “clean-outs”, and the general performance of individual units. It is also recommended that records of inspections be maintained.

Contact with “sharp” objects, including hypodermic needles, is a risk if the chamber is entered. All workers should be made aware of this risk, and all relevant precautions should be undertaken, including wearing personal protective equipment (full length thick rubber gloves and rubber waders).

2.2 FREQUENCY

It is recommended that routine inspections of **Q Guard™** units be undertaken at monthly intervals, and after periods of heavy rainfall or abnormal events such as oil spills.

2.3 EQUIPMENT REQUIRED

- Key (if lock fitted)



- Access cover lifter
- Torch and depth gauge

2.4 INSPECTION PROCEDURE

- Unlock covers and/or grate, if applicable
- Fully open covers and/or grate, if applicable, ensuring “accidental closure” lock mechanisms are secure
- Measure depth of sediment at both inlet and outlet ends of chamber and record
- Measure depth of oils etc at outlet end of chamber and record
- Close and lock covers and/or grate, if applicable

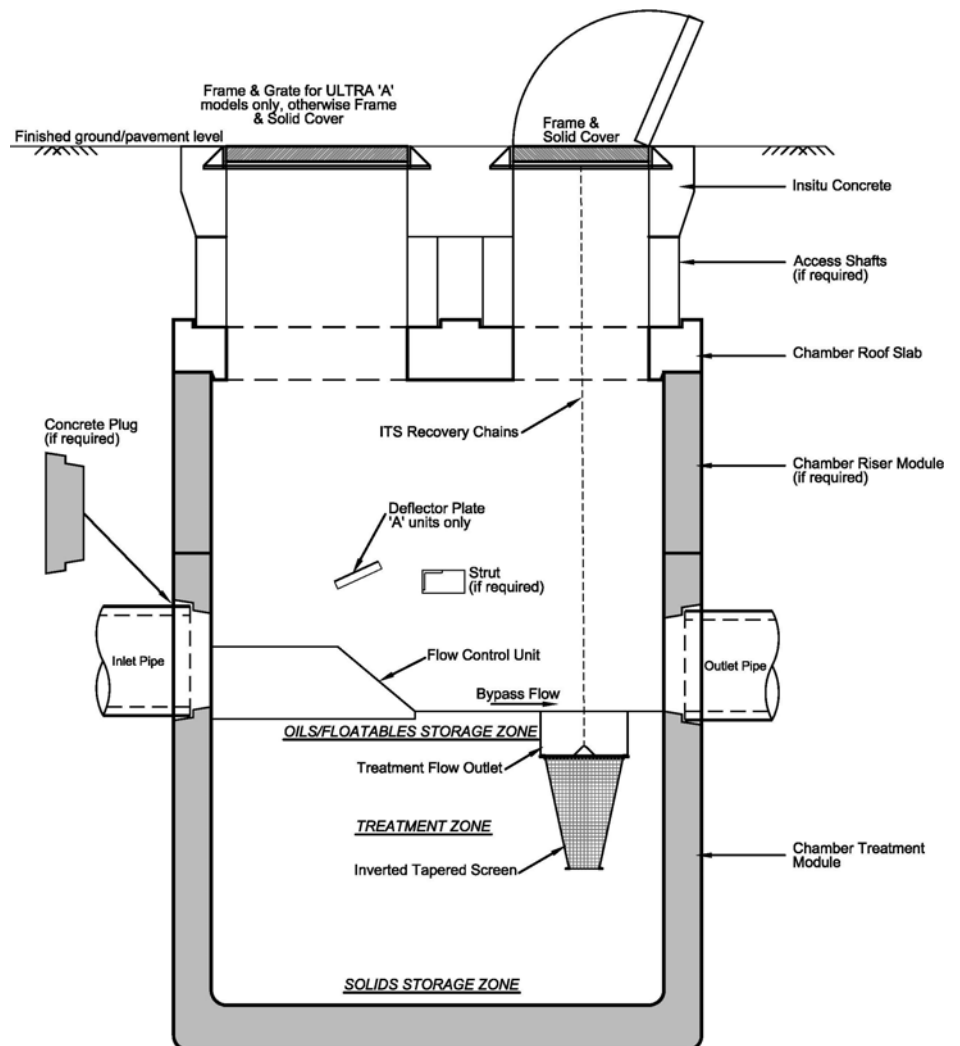


Figure 2.4 Typical Configuration

2.5 RECORDS

It is recommended that records of inspections be maintained. (refer attachment)

3 CLEAN-OUTS

3.1 GENERAL

Should hypodermic needles or other “sharps” be present as floatables, appropriate safety measures should be used, and if necessary a cleanout organised

The need for clean-outs will vary from installation to installation depending on the specific catchment characteristics, the number and intensity of rainfall events since the previous clean-out and abnormal events such as oil spills.

It is generally not necessary to enter the chamber during clean-outs. However, prior to any entry into the chamber, all workplace health and safety regulations and other statutory requirements should be strictly adhered to. Contact with “sharp” objects, including hypodermic needles, is a risk if the chamber is entered. All workers should be made aware of this risk, and take relevant precautions, including wearing personal protective equipment (full length thick rubber gloves and rubber waders).

3.2 FREQUENCY

It is recommended that full “clean-outs” be undertaken on at least an annual basis, or when inspections indicate that “clean-outs” are necessary. Typical criteria for determining the need for clean-outs are provided in Table 3.2 below:

Q GUARD™ MODEL	DEPTH OF SOLIDS IN SOLIDS STORAGE ZONE AT INLET OR OUTLET END	DEPTH OF OILS ETC. IN FLOATABLES STORAGE ZONE
“UA1” Models	300 mm	100 mm
“UA2” Models	300 mm	100 mm
“UA3” Models	300 mm	100 mm
“UB1” Models	350 mm	150 mm
“UB2” Models	350 mm	150 mm
“UB3” Models	350 mm	150 mm
“UC1” Models	400 mm	170 mm
“UC2” Models	400 mm	170 mm
“UC3” Models	400 mm	170 mm
“UD1” Models	400 mm	200 mm
“UD2” Models	400 mm	200 mm
“UD3” Models	400 mm	200 mm

Table 3.2: Typical Clean-out Criteria

3.3 EQUIPMENT REQUIRED

- Eductor or vacuum truck and tanker
- Key (if lock fitted) and access cover lifter
- Torch and Depth gauge

3.4 CLEAN-OUT PROCEDURE

- Unlock covers and/or grate, if applicable
- Fully open covers and/or grate, if applicable, ensuring “accidental closure” lock mechanisms are secure
- Measure depth of sediment at both inlet and outlet ends of chamber and record
- Measure depth of oils etc at outlet end of chamber and record
- **Start clean-out from inlet end opening**
- Continue the clean-out from the outlet end opening, then revert to inlet end opening
- Close and lock covers and/or grate, if applicable
- Ensure surrounding area is clean and tidy



3.5 DISPOSAL

Removal and disposal of pollutants during a clean-out should only be undertaken by an appropriately licensed waste contractor and strictly in accordance with relevant laws and regulations.

3.6 RECORDS

It is recommended that records of clean-outs be maintained (refer attachment).

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