

NSW Ministry of Health

Secondary Treatment System Accreditation Guideline 2018

Clauses 40 and 41

Local Government (General) Regulation 2005



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Further copies of this guideline can be downloaded from:

<http://www.health.nsw.gov.au/environment/domesticwastewater/Pages/default.aspx>

Enquires to Environmental Health Branch

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NSW Ministry of Health

Secondary Treatment System Accreditation Guideline 2018

1 Introduction

There are more than 400,000 un-sewered premises in NSW. Un-sewered houses still need to dispose, disperse or re-use sewage and wastewater in a sanitary manner. This is done by installing a sewage management facility (SMF) and its related land application area or pump out tank.

A Secondary Treatment System (STS) is a type of SMF which treats raw sewage from a single household to a high standard. STS use a secondary treatment process to produce a final effluent suitable for dispersal or utilisation on-site. Sewage includes all wastewater arising on the premises from the toilet, kitchen, laundry, bath, bathroom hand basin and shower. Sewage excludes backwashing from a swimming pool or spa pool. Spa baths and garbage grinders should not be installed in the house as the wastewater is not suitable for discharge to a STS being too high in solid organic matter.

Types of STS include Aerated Wastewater Treatment Systems (AWTS), aerobic sand filters and reed beds. STS cannot treat and disinfect sewage sufficiently and reliably to allow forms of reuse such as toilet flushing and cold water supply to washing machines.

A Sewage Management Facility (SMF) is by legal definition “a human waste storage facility or a waste treatment device intended to process domestic sewage”. Additionally, all STS vessels and tanks used to contain a STS must be separately accredited in accordance with the NSW Health Sewage Management Facility Vessel Accreditation Guideline (February 2016). Reed bed and aerobic sand filter containment mounds do not require vessel accreditation. See section 8 for a detailed explanation of the legislative framework.

The manufacturer of the STS is required to test the STS according to an Australian Standard using an independent testing agency known as a product certification body. Product specifications and other information to support

the STS design must also be produced.

The legislation requires the Secretary of the NSW Ministry of Health to issue a Certificate of Accreditation for a design or plan of a SMF before a local council may issue an approval for its installation, alteration or operation. See section 8 for details of the legislative framework.

2. Overview of Guideline

This guideline sets out the minimum requirements for accreditation, by the NSW Ministry of Health, of a type of SMF known as a STS which are generally available for purchase by retail, which:

- **treat and disinfect sewage**, not greywater only and not blackwater only; and
- uses more than primary treatment (solids settlement); and
- where the treated sewage is generated at a single domestic premises for the main purpose of recycling of effluent on-site for:
 - above ground spray irrigation;
 - covered surface drip irrigation;
 - shallow sub-surface drip irrigation to a depth of 100 -150 mm below ground level;
 - sub-surface disposal in trenches, transpiration beds and the like;
 - but not for internal household reuse; subject to individual approval of the local council.

This guideline does not apply to SMF which treat sewage only by primary treatment such as septic tanks, collection wells, sewage ejection pumping stations, septic closets, and common effluent drainage tanks which store raw sewage prior to dispersal underground or to a sewer. Furthermore, this guideline does not apply to greywater diversion devices or greywater treatment systems. There are separate Ministry Accreditation Guidelines available for:

- Domestic Greywater Treatment Systems;
- Sewage Management Facility Vessels; and
- Waterless Composting Toilets.

Greywater diversion devices however, are not accredited by NSW Health. They are approved under the “WaterMark” scheme administered by the Australian Building Codes Board.

3 Interpretation

3.1 Definitions and Abbreviations

The definitions and abbreviations used in *Australian Standard On-site domestic wastewater treatment units Part 3: Secondary treatment systems AS1546.3:2017* and *AS MP101:2017 Australian Standard Miscellaneous Publication* shall be used when interpreting this Guideline.

Other definitions and abbreviations used in the document are:

| | |
|--------------------------|--|
| Act | <i>Local Government Act 1993.</i> |
| AS/NZS1546.1:2008 | Australian Standard On-site domestic wastewater treatment units Part 1: Septic Tanks |
| AS1546.3 | Australian Standard On-site domestic wastewater treatment units Part 3: Secondary treatment systems AS1546.3:2017 |
| JAS-ANZ | Joint Accreditation System of Australia and New Zealand |
| Manufacturer | includes supplier |
| MP101 | Standards Australia Miscellaneous Publication SA MP 101:2017 Onsite domestic wastewater treatment – Conformity assessment requirements for AS1546.3 and AS1546.4 |
| NSW Health | NSW Ministry of Health |
| PCB | Product Certification Body |
| Regulation | <i>Local Government (General) Regulation 2005</i> |
| SMF | Sewage Management Facility |
| STS | Secondary Treatment System |

NOTE: Australian Standards must be purchased as they are not universally available.

4 Scope

The scope of this guideline is to:

- facilitate the issue of a Certificate of Accreditation by the NSW Ministry of Health for a design or plan of a STS to the manufacturer using a third party independent product certification system;
- provide background information about relevant legislation and roles of involvement;
- adopt components of *AS1546.3:2017 Secondary Treatment Systems and Miscellaneous Publication MP101:2017*;
- provide design and performance requirements;
- specify testing protocols and requirements; and
- specify product conformity requirements.

5 Inclusions

For the purposes of this Guideline the inclusions stated in section 1.2 of AS1546.3 is adopted.

6 Exclusions

For the purposes of this Guideline the exclusions stated in section 1.3 of AS1546.3 is adopted.

7 Objective

The primary objective of this Accreditation Guideline is to specify the requirements to be followed by STS manufacturers to obtain a NSW Ministry of Health Certificate of Accreditation for a design or plan of the their STS.

8 Legislation

Those activities which require prior approval of the local council are established in Section 68 of the *Act* under *Table of Approvals, Part C – “Management of Waste”*. Item 5 states that prior approval of the local council is required to “install, construct or alter a waste treatment device or a human waste storage facility or a drain connected to any such device or facility.”

Clause 3 of the *Regulation* defines a sewage management facility (SMF) as:

- (a) a human waste storage facility or
- (b) a waste treatment device intended to process sewage, and includes a drain connected to such a facility or device.

This definition ties the *Regulation* and section 68 of the *Act* together when considering the requirement for local council approval prior to SMF installation.

Those types of SMFs which are generally available for purchase by retail and which require accreditation by NSW Health are set out in clause 40 of the *Regulation* which states:

“(1) This Subdivision applies to such models of the following sewage management facilities as are generally available for purchase by retail:

- (a) wet composting closets,*
- (b) waterless composting closets,*
- (c) septic closets,*
- (d) septic tanks,*
- (e) holding tanks and collection wells used for the receipt and storage of effluent (other than those intended to be emptied after each use, such as chamber pots),*
- (f) waste treatment devices designed to comminute or macerate and discharge sewage to a sewerage system,*
- (g) waste treatment devices that receive and treat sewage before discharging effluent to a common effluent drainage scheme,*
- (h) waste treatment devices that treat sewage using a specific process to produce biosolids and disinfected effluent to a standard suitable, either separately or in combination, for recycling by surface or sub-surface irrigation or by internal or external household use,*
- (i) any other kind of sewage management facility specified in a notice published in the Gazette by the Director-General (Secretary) for the purposes of this clause.*

Note: Clause 40(1)(h) applies to STSs. It should also be noted that disinfection is included in this type of waste treatment device.

(2) However, this Subdivision does not apply:

(a) to a sewage management facility intended to treat:

- (i) sewage of a non-domestic nature, or*
- (ii) sewage from premises normally occupied by more than 10 persons, or*
- (iii) an average daily flow of sewage exceeding 2,000 litres, or*

(b) to the part of a sewage management facility that consists of a drain connected to the facility, or

(c) to any other component of a sewage management facility that is specified in a notice published in the Gazette by the Director-General

(Secretary) of the Department (Ministry) of Health for the purposes of this clause.”

Clause 41 of the *Regulation* specifies and clarifies the roles of NSW Health and local councils and is the reason behind the development of this Guideline.

“A council must not approve the installation or construction of a sewage management facility to which this Division applies unless the council is satisfied that the facility is to be installed or constructed to a design or plan that is the subject of a certificate of accreditation from the Director-General (Secretary) of the Department (Ministry) of Health, being a certificate that is in force.”

In this case a STS is a type of SMF which requires a NSW Health certificate of accreditation before a local council may approve of the installation under section 68 of the *Act*.

STSs of a capacity larger than those specified in clause 40(2) or those intended for a non-domestic application are not legally subject to the accreditation process but may voluntarily proceed through the process.

It should be noted that NSW Health certification of accreditation does not include the drainage to or from the STS, the land application system or the final dispersal or utilisation method. This is a matter for the local council which should consider the provisions of the Plumbing Code of Australia, relevant Australian and New Zealand Standards, site assessments, recommendations from the Office of Local Government and its own wastewater management strategy or local approval policy.

A prototype model of STS under test or development does not require prior accreditation because it is not yet generally available for purchase by retail sale. Neither does one that is designed by an owner for installation on their own premises, or one designed by another person where the design is specific and unique to those premises. Where a design is repeated on other premises the STS design must be accredited.

Also, NSW Health accreditation is not required where the STS is intended to treat sewage of a non-domestic nature, for premises normally occupied by more than 10 persons or where the average daily flow exceeds 2,000 litres.

A “Certificate of Accreditation” issued by the Secretary is to facilitate an approval to install, construct or alter a waste treatment device issued by the local council under the provisions of Section 68 of the *Act*. A “Certificate of Accreditation” is issued to a specific design or plan of both SMF vessel(s) and separately to a STS produced by a specific manufacturer or supplier and for a definite length of time, usually a maximum of five years.

The Plumbing and Drainage Act 2011 and the Plumbing Code of Australia apply to the sanitary drainage system upstream of the SMF in all local council areas but do not apply to the On-site Wastewater Management Systems (See section F of the NSW Appendix to the Plumbing Code of Australia).

9 Roles of Involvement

9.1 Local Councils

The powers allowing local councils to grant approval to construct, install and operate a waste treatment device and related effluent application area at a particular site are provided in Section 68, Part C - Management of Waste, of the *Act*, and the *Regulation*. It is the function of the local council to administer and facilitate approval of the installation, construction or alteration of waste treatment devices in their areas.

Local councils require the owner / occupier of the premises to periodically obtain an approval to operate a SMF (as defined under section 68A of the *Act* and clause 42 of the *Regulation*). This is to ensure that the SMF is operating correctly, not creating a public health risk, environmental damage or affecting the amenity of the local area. The approval to operate should initially be considered simultaneously with the approval to install the SMF. The local council must consider any condition of the Certificate of Accreditation imposed on the SMF and the manufacturer.

Further, where local councils find a SMF which does not comply with its approval or is creating unsatisfactory conditions the local council may “order” the owner / occupier to comply or remedy the condition within a certain specific time limit.

9.2 Office of Local Government; Department of Premier and Cabinet.

The Office of Local Government is a division of the NSW Department of Premier and Cabinet and is responsible for local government administration across NSW. Operating within seven strategic objectives the Office has a policy, legislative, investigative and program focus in matters ranging from local government finance, infrastructure, governance, performance, collaboration and community engagement. The Office strives to work collaboratively with the local government sector and is the key adviser to the NSW Government on local government matters. The Office has responsibility for maintaining and reviewing the Local Government Act and Regulations. It also developed the Septic Safe program.

<http://www.olg.nsw.gov.au/sites/default/files/Easy-septic-guide.pdf>

9.3 NSW Ministry of Health

The NSW Ministry of Health administers Certification of Accreditation of SMF in accordance with Clause 41 of the *Regulation*. All applications (see Annexure 1 for the application form) for accreditation of SMF should be sent to the Senior Policy Analyst, On-site Domestic Wastewater Management, Health Risk and Regulation Unit, Environmental Health Branch, NSW Ministry Health, LMB 961, North Sydney, NSW, 2059. Enquires should go to (02) 9424-5973 (Monday and Tuesday) or email to HRAR@moh.health.nsw.gov.au. All Certificates of Accreditation are uploaded to:

<http://www.health.nsw.gov.au/environment/domesticwastewater/Pages/default.aspx>

9.4 Product Certification Body

A Product Certification Body (PCB) is defined and recognised under Section 2 of MP101 as an organisation that evaluates and certifies a product’s fulfilment of specified requirements in accordance with AS/NZS ISO/IEC 17065. A PCB is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ). A PCB in this case certifies that a STS meets the requirements of AS1546.3. JAS-ANZ maintains a register of accredited PCBs. PCBs may not collect samples, conduct tests or analyse samples.

9.5 Laboratory

A laboratory is defined and recognised under Section 5 of SA MP101:2016. A laboratory may only take samples, conduct tests and analyses for which it has been accredited.

10 NSW Health Certificate of Accreditation Application Requirements

10.1 Transition to 2018 Accreditation Guideline

10.1.1 A STS **without** an existing NSW Health Certificate of Accreditation shall comply with this Guideline effective from 31 December 2017. Testing and other requirements set out in 10.2 below are required in order to obtain a Certificate of Accreditation.

10.1.2 A STS **with** an existing NSW Health Certificate of Accreditation may be extended to, but shall expire on **31 December 2020**. This extension is to allow time to retest and comply with this Guideline.

10.2 Summary of Requirements

In accordance with the timelines of 10.1.1 and 10.1.2 all STS will need to be tested at a test site supervised by a PCB and satisfy the requirements of AS 1546.3 and SA MP101. (See 1.9 of AS 1546.3) The STS manufacturer will need to obtain product certification from a PCB again satisfying the requirements of AS 1546.3. A test report, product certification, A4 plan, details of manuals and information; vessel accreditation and details of STS markings will need to be attached to an application form (Annexure 1) and submitted to NSW Health as outlined in section 9.3. A checklist of items to be submitted is contained in Annexure 2.

The manufacturer must establish a web site where manuals and other information shall be generally available. These requirements are expanded under the following headings.

10.3 Adoption of Standards

This Guideline generally adopts AS 1546.3 and MP 101 unless otherwise stated. Specific sections of AS1546.3 and MP101 are adopted where stated.

10.4 Performance Criteria and Design Requirements

10.4.1 NSW Legislation. Clause 36 of the *Regulation* specifies performance requirements that a STS must:

- be made of durable and non-corrosive components;
- have a minimum service life of 15 years and 5 years for electrical and mechanical components;
- be constructed in accordance with the STS specifications;
- have easy access for maintenance and removal of contents;
- be constructed with work, health and safety in mind,
- be anchored if it is a permanent fixture.

10.4.2 Australian Standard. The STS shall meet the Australian Standard performance criteria and design requirements as appropriate in Section 2.2 and 2.3 of AS1546.3 respectively.

Where the STS is enclosed in a manufactured vessel or vessels they shall be separately accredited by NSW Health to AS/NZS 1546.1:2008.

10.4.3 Scum and Sludge Capacity. It is a design requirement for NSW in accordance with 2.3.2(b) of AS1546.3 that where primary treatment is provided a minimum additional scum and sludge capacity of an extra daily flow (1500L for 10 persons) is provided. For a ten person unit the minimum primary treatment capacity is a two daily flow capacity of 3000L. Where this scum and sludge capacity is not provided the design must be justified by attachment to the application.

10.4.4 Partition Wall. Where the primary treatment capacity is greater than 2050L then a partition wall is incorporated in the primary treatment compartment to satisfy 2.4.6, 3.4.1 and Figure 3.1 of AS/NZS1546.1.

10.4.5 Disinfection. It is a design requirement for NSW that a disinfection unit be incorporated in the STS to satisfy 2.3.2 (f) of AS1546.3.

10.4.6 Service Life Compliance Statement. A statement of compliance with the minimum service life of 15 years in accordance with 10.4.1 is to be attached to the application form. See Annexure 2 checklist.

10.5 Testing and reporting

10.5.1 The test STS, meeting the requirements of clauses 1.8.44 and 1.9, and Appendix A2 of AS1546.3 shall be installed in accordance with A4 of AS1546.3. The test site shall meet the requirements of section 4, AS MP101 and a testing facility meeting the requirements of 1.8.45 and Appendix A3 of AS1546.3.

10.5.2 The test shall be conducted and supervised by a PCB, using a laboratory satisfying the requirements of AS MP101 for all sampling, testing and analyses. The test shall be conducted strictly in accordance with Section 2, and Appendix A of AS1546.3.

10.5.3 The first sentence of A5.2.2 of AS1546.3 shall be interpreted to also mean that no supplements or additives whatsoever shall be added to the influent to alter, change or enhance the characteristics of the influent.

10.5.4 The PCB shall produce a report in accordance with Appendix A5.13 of AS1546.3 and support the compliance statement in accordance with 10.4.6 of this document.

10.6 Product Certification

The manufacturer must obtain Type 5 product certification of the STS, of at least 3 years validity, from a PCB for compliance with AS1546.3 and MP101.

10.7 Plan and Specifications

Specifications, including the details of the nominated accredited vessels of the STS must be provided with the application. Retrofitted STS into alternate configuration or alternate sized vessels are modifications that may require re-testing. NSW Health should be consulted for an assessment.

The manufacturer must produce a PDF copy of a plan of the STS on A4 size paper, detailing plan and cross sectional views of the STS and lid. The plan is to be suitable for use, with the submission of applications under Section 68 of the *Act* to the local council.

10.8 Manuals / Information

The manufacturer must produce:

- an installation manual,

- an operation manual,
- a maintenance and service manual in accordance with Appendix C and Appendix D of AS1546.3 respectively. Information satisfying Section 4 of AS1546.3 shall be provided with the application for accreditation.

The manufacturer must also produce a service report form to compliment the maintenance and service manual.

10.9 Web Site

The manufacturer shall maintain a web site and provide details of the URL in the application form to NSW Health. The manufacturer shall upload to its web site for the STS the following information unless the information is commercial-in-confidence;

- An installation instruction manual in accordance Appendix C AS1546.3.
- An operation, maintenance and service manual in accordance Appendix D AS1546.3
- The Statement of Warranty
- The Statement of Service Life of 15 years and 5 years for electrical and mechanical components
- The Product Certification document
- The A4 Plans
- The Certificate of Accreditation issued by NSW Ministry of Health
- The manufacturer's service report form.

10.10 Marking

The manufacturer must provide evidence as to the marking of the STS in accordance with Section 3 AS1546.3. A photo of the marking is sufficient.

10.11 Application Form

10.11.1 The manufacturer must submit an application for Certification of Accreditation which shall be in the format attached as Annexure 1 and be forwarded to the Senior Policy Analyst, On-site Domestic Wastewater Management, Health Risk and Regulation Unit, NSW Ministry Health, LMB 961, North Sydney, NSW, 2059. Enquires should be directed to the Senior Policy Analyst, On-site Domestic Wastewater Management on (02) 9424-5973 (Monday and Tuesday only). Alternatively the application may be submitted by email to

HRAR@moh.health.nsw.gov.au. There is no prescribed fee.

10.11.2 The manufacturer must attach information to satisfy the checklist at Annexure 2 to the application. PDF is preferred.

11 Modifications

Modifications shall be considered in accordance with 2.3.13 of AS1546.3 and 10.7 (retrofitting in alternate vessels).

12 Expiry of Certificate of Accreditation

A Certificate of Accreditation may be granted for a maximum of five (5) years:

- to 31 December following the expiry of the Product Certification after 30 June; or
- to 31 December prior to the expiry of the Product Certification before 30 June.

13 Certificate of Accreditation Conditions

A Certificate of Accreditation may be issued subject to conditions including a requirement for annual verification sampling for a period of three (3) years.

A generic set of conditions are attached as Annexure 3. It should be noted that this set of conditions is not exhaustive and may be varied to suit the STS.

14 Servicing of STS

Advisory Note 5 considers servicing of STS. It explains the condition of accreditation requiring authorisation of independent service agents. This advisory note can be found at:

<http://www.health.nsw.gov.au/environment/domesticwastewater/Pages/default.aspx>

Also, there are two service forms that must be used by manufacturer employed or authorised independent service agents:

- Manufacturers service report form, a copy of which is given to the owner / occupier; and
 - The local council service report form, a copy of which is sent to the local council. The local council report form is attached as Annexure 4.
-

Annexure 1: Application Form



**NSW Ministry of Health
Health Risk and Regulation Unit**

**APPLICATION FOR CERTIFICATE OF ACCREDITATION OF A SEWAGE MANAGEMENT FACILITY BEING A
SECONDARY TREATMENT SYSTEM (STS)**

I, as the appropriate applicant on behalf of the manufacturer/supplier, wish to apply for a “Certificate of Accreditation” for a Sewage Management Facility being a Secondary Treatment System to be issued by the Secretary of the NSW Ministry of Health, pursuant to clause 41 *Local Government (General) Regulation 2005*.

| Detail | Information |
|-----------------------------|-------------------------------------|
| Title (Mr, etc.) | |
| Name | |
| Position | |
| Email | |
| Telephone | |
| Registered Business Name | |
| Trading Name | |
| ABN | |
| Registered Business Address | |
| Postal Address | |
| Business Web URL | |
| Name of STS | |
| Type of STS | AWTS, Reed Bed, Sand Filter, Other: |

Attached are:

1. A Specification / Description of the STS in conformity with the template on the following page; and
2. Details satisfying the Checklist at Annexure 2 on page 10.

Signature: _____ Date: ____/____/____

The completed application should be forwarded to:
Senior Policy Analyst
On-site Domestic Wastewater Management
Environmental Health Branch
NSW Ministry of Health
Locked Mail Bag 961
NORTH SYDNEY NSW 2059

It is preferable that the application be emailed to:
HRAR@moh.health.nsw.gov.au

Specification / Description of the {STS}

Name and Model of STS:

The STS is designed to treat sewage from a residential dwelling occupied by a maximum of XX persons.

The STS is contained in the following vessel(s):

- Vessel 1: A septic tank/collection well* with design capacity of L.
NSW Health Accreditation Number STCW.....
- Vessel 2*: A septic tank/collection well* with design capacity of L.
NSW Health Accreditation Number STCW.....
- Vessel 3*: A septic tank/collection well/pump well* with design capacity of L.
NSW Health Accreditation Number STCW.....

| Chamber | Design capacities |
|---------------------------------|-------------------|
| Primary treatment | L |
| • Partition | yes / no* |
| Secondary treatment | L |
| • Aeration chamber | L |
| • Clarifier | L |
| • Irrigation chamber | L |
| Emergency storage | L |
| Operational water level (depth) | (mm) |
| • primary | |
| • secondary | |

The emergency storage capacity is achieved by

.....

.....

The {STS} has the following components: (Amend or describe as necessary)

- Primary treatment tank –
{eg Sewage from the dwelling flows into the primary treatment tank where a physical separation of foreign material such as fat, grease and scum occurs and allows for a reduction in BOD and TSS concentrations}.
- Aeration chamber –
{eg. Primary treated wastewater flows into the aeration chamber where aeration is cycled (X.X hrs ON/ X.X hrs OFF) to assist denitrification of the nitrogen oxides in the wastewater. The media in the chamber provides a surface area for the growth of bacteria to allow for the bio-degradation of organic material in the wastewater.}
- Clarifier –
{eg. Treated wastewater is transferred into the clarifier allowing for the removal of settled solids. The solids are transferred to the primary treatment tank by way of an airlift device.}
- Disinfection –
{eg. A chlorine disinfection unit is installed on the outlet of the clarifier.}
- Filtration –
{eg. The treated and disinfected effluent is filtered through a ... }.
- Air Supply –
{eg. Air is supplied to the contact aeration chamber by aair blower or equivalent, producing an airflow of a nominal 120 litres/minute at 1.3 m water depth. The air is distributed via a manifold to aeration legs located near the base of the aeration chamber and airlift devices located in the aerobic zone and in the clarifier. The airlift devices continually return partially treated wastewater and settled solids to the inlet of the primary treatment tank.}
- A {Brand Name} model submersible irrigation pump or equivalent is installed in the irrigation chamber.

{ } Denotes delete, amend or describe as appropriate

Annexure 2: Checklist of Compliance and / or Attachments to be submitted with Application

| Item | Attached / Complies |
|--|----------------------------|
| Section 10.4 | |
| Made of durable and non-corrosive components (10.4.1) | ✓ / X |
| Has a minimum service life of 15 years and 5 years for electrical and mechanical components. (10.4.1) | ✓ / X |
| Compliance statement attached. (10.4.6). | ✓ / X |
| To be constructed in accordance with the STS specifications (10.4.1) | ✓ / X |
| Has easy access for maintenance and removal of contents (10.4.1) | ✓ / X |
| Is constructed with work, health and safety in mind (10.4.1) | ✓ / X |
| Has anchoring if it is a permanent fixture (10.4.1) | ✓ / X |
| Meets AS1546.3:2017 performance requirements and design criteria (10.4.2) | ✓ / X |
| Certificate of Accreditation Code for vessel(s) used to contain the STS eg. STCW0XX (10.4.2) | STCW0 |
| Scum and Sludge capacity exceeds 3000L or justification explanation attached (10.4.3) | ✓ / X |
| Partition wall included where primary treatment capacity exceeds 2050L (10.4.4) | ✓ / X |
| Disinfection unit included in test (10.4.5) | ✓ / X |
| Section 10.5 | |
| Test STS and test site (testing facility) complies (10.5.1) | ✓ / X |
| Test conducted by PCB using NATA laboratory (10.5.2) | ✓ / X |
| No additives or supplements added to influent (10.5.2) | ✓ / X |
| Test Report from PCB attached (10.5.3) | ✓ / X |
| Section 10.6 | |
| Product Certification attached (10.6) | ✓ / X |
| Section 10.7 | |
| A4 plan & cross section of SMF and specifications submitted in PDF (10.7) | ✓ / X |
| Section 10.8 | |
| Manuals (installation, operation and servicing) submitted in PDF. Manufacturer's service report form attached (10.8) | ✓ / X ✓ / X |
| Section 10.9 | |
| Web site for information (10.9) URL: | ✓ / X |
| Section 10.10 | |
| Photo of Tank Markings (10.10) | ✓ / X |
| Other | |
| Any special details for mention in the STS listing on the Ministry's web site (e.g. Contact name, telephone, email, etc.). | ✓ / X |

Annexure 3: Generic Conditions of Accreditation (Schedule 2: Conditions of Accreditation)

A3.1 General

A3.1.1 Prior to installation of the {STS} the owner/occupier of the premises shall make an application, in accordance with Clause 26 of the *Local Government (General) Regulation 2005*, to the local council to install and operate the {STS} as a waste management facility in accordance with Section 68, Part C Item 5 and Part C item 6 of the *Local Government Act 1993* and

A3.1.2 In accordance with Clause 36 of the *Local Government (General) Regulation 2005*, the {STS} shall have an expected service life of 5 years in the case of mechanical and electrical components and 15 years in the case of other components. The {STS} must be installed or constructed:

- in accordance with the accredited specifications of the type tested unit and in accordance with good trade practice, and
- so as to allow ease of access for maintenance, and
- with regard to the health and safety of users, operators and persons maintaining the facility, and
- so as to make appropriate provision for access to and removal of contents in a safe and sanitary manner, and
- must, if it is intended to be a permanent fixture, be anchored to prevent movement.

A3.1.3 The {STS} shall be supplied, constructed and installed in accordance with the design as submitted and accredited by the NSW Ministry of Health. The {STS} shall not be modified or altered except that alternate individual mechanical and electrical components such as pumps, PLCs, etc, may be substituted provided that the component meets the product certification and accredited design specification.

A3.1.4 Any modification or variations to the accredited design of the {STS} shall be submitted for separate consideration and variation of the Certificate of Accreditation by the Secretary of the NSW Ministry of Health. Modifications will be considered in accordance with section 2.3.13 of AS1546.3:2017 and 10.7 of the Guideline regarding retrofitting in alternate vessels.

A3.1.5 Each {STS} shall be permanently and legibly marked in accordance with section 3 of AS1546.3:2017.

A3.2 Information

A3.2.1 The manufacturer shall provide a web site and upload the following information once Ministry accreditation has been obtained. The information should be provided in PDF. Commercial-in-Confidence information may be withheld from the web site but be supplied on request to local councils, authorised service contractors and owners:

- | | |
|------------------------------------|--|
| • Statement of warranty | • Owner's Manual |
| • Statement of service life | • Manufacturer's Service Report Form |
| • Product Certification | • Engineering Drawings |
| • Installation Manual | • Detailed Specifications |
| • Maintenance Manual | • A4 Plans for local council application |
| • Service Manual (see also A3.4.5) | • NSW Health Accreditation Certificate. |

A3.2.2 The owner's manual, shall set out the care, operation, maintenance and on-going management requirements of the system and include details of:

- the treatment process
- procedures to be followed in the event of a system failure or alarm activation
- emergency contact numbers

A3.3 Installation and Commissioning

A3.3.1 The local council should require that the {STS}, is inspected and checked by the manufacturer or the manufacturer's agent. The manufacturer or the agent is to certify that the system has been installed and commissioned in accordance with its design, conditions of accreditation and any additional requirements of the local council.

A3.3.2 The local council should require that all electrical work must be carried out by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.

A3.4 Maintenance

A3.4.1 The owner / occupier of the premises shall enter into a minimum 12 month contract or agreement with a service agent and ensure that the {STS} is serviced:

- in accordance with the manufacturer's / supplier's service manual and using the manufacturer's / supplier's service sheet; and
- by a service agent who
 - has completed a course on the servicing and maintenance of STS; and has some supervised servicing experience or extensive un-supervised experience;
 - is employed or authorised by the manufacturer / supplier of the {STS};
 - uses replacement parts which meet the minimum specification of the {STS};
 - has advised of their name, contact details and credentials to the local council;
 - submits a completed NSW Health "Local Council Service Report" to the local council immediately after each and every service;
 - shall report to the local council any instances where the owner / occupier does not accept recommended remedial actions; and
 - does not perform electrical work or enter confined spaces unless trained and is suitably qualified.

A3.4.2 The owner/occupier of premises where the {STS} is installed shall not service the {STS} unless they are authorised by the manufacturer.

A3.4.3 The {STS} once installed and commissioned shall be serviced at {X} monthly intervals.

A3.4.4 Each service shall, as a minimum, include a check on all mechanical, electrical and functioning parts of the system including where present the following items. These items shall be included in the Service Manual and Manufacturer's Service Report Sheet.

- The chlorinator and replenishment of the disinfectant
- Pump and air blower
- The alarm system
- Slime growth on the filter media
- Operation of the sludge return system
- The effluent irrigation pump
- The land application area
- On-site testing for free residual chlorine, pH and dissolved oxygen.

A3.5 On-going Final Effluent Quality Verification

A3.5.1 Final effluent from the {STS} taken in any random grab sample shall comply with the following standard:

- BOD⁵ less than 30 mg/L
- TSS less than 45 mg/L
- E. coli less than 100 cfu/100 ml
- Free residual chlorine greater than 0.2 and less than 2.0 mg/L

A3.6 Permitted uses

A3.5.1 The effluent is suitable for re-use for garden purposes by way of any of the forms of irrigation as described in AS/NZS 1547:2000:

- above ground spray irrigation
- surface drip irrigation covered by mulch
- shallow sub-surface drip irrigation to a depth of 100 -150 mm below ground level
- sub-surface disposal in trenches, transpiration beds and the like
- but not for internal household reuse

Each of these forms of irrigation is subject to the approval of the local council.

A3.7 Reduction in nutrient levels

The {STS} has been designed to reduce nitrogen and phosphorus concentration in wastewater. During the testing of the {STS} the treated effluent was tested for total N (TN) and total P (TP) concentrations. The treatment process has the capacity to reduce the TN and TP concentrations as follows:

- Total N from an average of xx.x mg/l to xx.x mg/l which represents a reduction of xx.x%;
- Total P from an average of xx.x mg/l to x.xx mg/l which represents a reduction of xx.x%.

(xxx = Values of N and P are to be determined from test results)

A3.8 Cancellation of Certificate of Accreditation

Failure to comply with the conditions of Accreditation could result in the cancellation of the Certificate of Accreditation and removal of the {STS} from the Register of STS on the Ministry Website.

{STS} = substitute name of STS

Annexure 4: Local Council Service Report



| Local Council STS (DGTS) Service Report: (Version 5: August 2017) | | |
|---|-----------------------------------|-------------------------------------|
| Owner's Name: | | Local Council: |
| Installation Address: | | |
| System Brand & Model: | <input type="checkbox"/> Domestic | <input type="checkbox"/> Commercial |
| Date of this service: / / | Date of last Service: / / | Next service due: / / |
| Has the STS/DGTS been serviced in accordance with the manufacturer's / supplier's requirements and using the service sheet? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why? | | |
| STS/DGTS functioning correctly? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why? | | |
| According to sludge-judge or other methodology is de-sludging needed? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended? | | |
| Offensive odours? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended? | | |
| Alarms tested and functional? <input type="checkbox"/> Yes <input type="checkbox"/> No If not "functional" what action is recommended? | | |
| Final Effluent Quality Tested? <input type="checkbox"/> Yes <input type="checkbox"/> No Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No Chlorine tablets remaining? <input type="checkbox"/> Yes <input type="checkbox"/> No Quality? <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory On what evidence is this judgment made? If "Unsatisfactory" what action was recommended? | | |
| Land Application Area Surface ponding? <input type="checkbox"/> Yes <input type="checkbox"/> No Run off? <input type="checkbox"/> Yes <input type="checkbox"/> No Excess plant growth? <input type="checkbox"/> Yes <input type="checkbox"/> No Effluent leaving premises? <input type="checkbox"/> Yes <input type="checkbox"/> No High risk areas contaminated?* <input type="checkbox"/> Yes <input type="checkbox"/> No * Patio, play areas, BBQ, etc Operating satisfactorily? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Overall Condition of STS? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Comments / Action Recommended / Repairs Needed / Repairs Performed: | | |
| Has the owner / occupier taken recommended actions? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Service Agent: | | Contact Details: |
| Signature: | | Date: |

Source: Adapted from "Checklist 4.2: Operational AWTS inspection report for use by service providers and Council inspectors" in *Designing and Installing On-Site Wastewater Systems*, Sydney Catchment Authority, May 2012