

Installation of Wastewater Management Systems

Purpose

This building note outlines new requirements for the installation of Wastewater Management Systems (WMSs) inside building control areas in the Northern Territory (NT).

Changes to requirements

The updated Code of Practice for Wastewater Management, published by the Department of Health and approved by the Chief Health Officer on 4 November 2020, as amended from time to time, has now been adopted under Building Regulation 4 of the NT *Building Regulations 1993* for use **inside** building control areas.

The design, installation and operation of WMSs must now comply with the new Code of Practice for Wastewater Management 2020 in all locations throughout the NT.

The new Code of Practice for Wastewater Management 2020 can be found online here: https://nt.gov.au/_data/assets/pdf_file/0011/947783/code-of-practice-for-wastewater-management.pdf

Design and certification requirements

No changes have been made to the requirements for registration of the practitioners who design, install and certify the installation of a WMS inside building control areas.

These requirements remain as follows:

WMSs installed inside building control areas that meet the 'Deemed-to-Satisfy' solutions of the Plumbing Code of Australia can be designed and certified by one of the following building practitioner categories:

- Certifying Plumber and Drainer
- Certifying Plumber and Drainer (Design)
- Certifying Engineer (Hydraulic)

Where the design and installation of a WMS does not meet the 'Deemed-to-Satisfy' solutions of the Plumbing Code of Australia, the works are considered to be a performance solution under the *Building Act 1993* and **must** be designed and certified by a Certifying Engineer (Hydraulic).

Examples of Systems requiring performance solutions include:

- Systems with a daily design flow capacity greater than the flow capacity covered by AS/NZS 1547:2012, (design flow of over 2000 L per day / 10 equivalent persons)
- Systems that do not comply with the Plumbing Code of Australia or Australian Standards

- System that require a number of product approved systems to be used in the design
- Community Wastewater Management Systems

Further information can be obtained online here:

<https://nt.gov.au/property/building/health-and-safety/wastewater-management/inside-building-control-areas>

Building Advisory Services (BAS), a branch of Department of Infrastructure, Planning and Logistics is the regulator for the installations of WMSs inside declared building control areas and can be contacted on (08) 8999 8985 or via email on bas@nt.gov.au.

Key changes to the code

The updated code provides information about applying 'AS/NZS 1547:2012 On-site Domestic Wastewater Management' and includes additional NT specific requirements as listed below.

Site and soil evaluation

A site and soil evaluation, also known as a land capability assessment must be carried out by a suitably qualified person defined as a soil scientist or environmental engineer with appropriate training, competence and experience with site and soil evaluation for the design and installation of a WMS.

Site and soil evaluation for wastewater management must be carried out in general accordance with Section 5 of AS/NZS 1547:2012.

Setback distances

This requirement recognises NT local conditions with respect to determining setback distances for the design of WMSs and replaces the setback distance range in Table R1 of Appendix R Recommended setback distances for land application systems (informative) of AS/NZS 1547:2012.

Determining hydraulic flows and load inputs

This section recognises NT local conditions with respect to determining hydraulic flows and load inputs for the design of WMSs, however, it must be read in conjunction with the Section 5 – Design of on-site systems of AS/NZS 1547:2012. This section takes precedence over design flows listed in Appendices H and J in AS/NZS 1547:2012 to allow for NT local conditions, especially for sizing septic tank capacities for dwellings in Aboriginal communities.

Certificate of compliance

A new section 40 *Certificate of compliance – wastewater management system installation* has been developed to confirm compliance of the installation and outlines the relevant information required to accompany the certificate.

The following information must be submitted with the section 40 *Certificate of compliance – wastewater management system installation*:

- Design plan/s showing:
 - The location of the installation of the Wastewater Management System on the Property
 - Details of the relevant setback distances to site features as per the Code of Practice for Wastewater Management

- The design and size of the land application area, e.g. size of absorption trench, size of irrigation disposal area
- Direction of site slope if applicable
- A copy of the site and soil evaluation report
- Evidence of design and certification by a registered Certifying Engineer (Hydraulic) where the installation does not comply with the deemed-to-satisfy requirements of the Plumbing Code of Australia, including AS/NZS 3500 and is therefore considered a performance solution.

From the 1 June 2021, the new section 40 form must be used for the installation of all WMSs, including those installed with other building works, or when a replacement WMS is being installed.

A copy of the new form is attached for familiarisation and can be obtained from BAS or downloaded for use online here:

<https://nt.gov.au/property/building/get-a-building-certified/building-certification-industry-forms-and-resources>

Installing a wastewater system alongside other works

To install the WMS at the same time as other building works are being carried out (a new house, industrial or commercial development), the design of the WMS must be included as part of the building permit.

After the WMS is installed, the plumber and drainer must contact [Building Advisory Services](#) (BAS) before the works are covered to lodge a mandatory drainage notification.

Before granting an occupancy permit, the building certifier may need:

- a compliance certificate (s40 form) for the WMS and
- any associated documents.

Installing a wastewater system on its own

To install a WMS without any other building work, for example replacing or upgrading an existing system, a permit for plumbing-only works must be sought and the following carried out:

The installing licenced plumber and drainer must:

- contact BAS:
 - before starting work and
 - after installation - before the works are covered (mandatory drainage notification)
- ensure the WMS certificate of compliance (s40 form) is:
 - completed by a building practitioner and
 - submitted to BAS within seven days of the completed work to be kept on the building record for the property.

Guidance notes for wastewater management

The Guidance Notes for Wastewater Management provides additional supporting information to the Code of Practice for Wastewater Management on the technical requirements for the selection, design, installation and management of WMSs in the NT.

The examples of sizing land application areas may be particularly helpful in designing an appropriate WMS.

The Guidance Notes can be obtained online here:

<https://nt.gov.au/property/building/health-and-safety/wastewater-management/wastewater-management-codes-and-guidelines>

Wastewater management systems outside building control areas

The Department of Health is the regulator for installations of WMSs outside declared building control areas and can be contacted on (08) 8922 7152 or via email on wastewater@nt.gov.au

WMSs installed outside building control areas that meet the Deemed-to-Satisfy solutions of the Plumbing Code of Australia can be designed and installed by a plumber and drainer licensed under the *Plumbers and Drainers Licensing Act 1983* as an Advanced Tradesman.

Where the design and installation of a WMS does not meet the 'Deemed-to-Satisfy' solutions of the Plumbing Code of Australia, e.g. a design flow of over 2000 L/day (10 Equivalent Persons), the works are considered to be a performance solution and must be designed by a Hydraulic Consultant and include Notification to the Department of Health.

Further information can be obtained online here:

<https://nt.gov.au/property/building/health-and-safety/wastewater-management/outside-building-control-areas>

Further information

Contact Building Advisory Services for further information:

- Email bas@nt.gov.au
- Phone 08 8999 8985



Mark Meldrum

Director of Building Control

27 April 2021

Certificate of Compliance - Wastewater Management System Design / Installation

Section 40 of the *Building Act 1993*

All fields are mandatory.			
Property/project details			
Lot/portion number		Address	
Building or plumbing permit number			
Work completed date			
Type of certification - mark with X (select one only)			
Design only			
Installation only			
Design and installation			
Type of works - mark with X (select one only)			
Installation of a new wastewater management system			
Replacement of an existing wastewater management system			
Description of work - clearly detail all work carried out on site			
Wastewater management system (WMS) details			
Type of WMS - mark with X			
Secondary treatment system			
Greywater treatment system			
Septic system			
Holding tank			
Composting / hybrid toilet			
Other / alternative treatment system			

Certificate of Compliance - Wastewater Management System Design / Installation

Effluent disposal or land application method – mark with X				
Absorption trench/bed				
Evapotranspiration – absorption (ETA) trench/bed				
Mound system				
Spray irrigation				
Shallow subsurface drip irrigation				
Low pressure effluent distribution (LPED)				
Recirculating evapotranspiration system				
Pump out from holding tank to an approved facility				
Other				
Make/Model and capacity of the WMS				
Wastewater design flow to be serviced by the WMS (L/day)				
Design loading rate (DLR) / Design irrigation rate (DIR) used for sizing of land application area (mm/day)				
Effective area of land application area				
NT product approval	Approval no		Expiry	
Did the work involve a performance solution? (refer to NCC)			Yes / No	
Documents attached				
<p>You must provide the following with this certificate:</p> <ul style="list-style-type: none"> • design plan/s showing: <ul style="list-style-type: none"> ○ the location of the installation of the Wastewater Management System on the Property ○ details of the relevant setback distances to site features as per the Code of Practice for Wastewater Management ○ the design and size of the land application area, e.g. size of absorption trench, size of irrigation disposal area ○ direction of site slope - if applicable • a copy of the site and soil evaluation report • where the installation does not comply with the deemed-to-satisfy requirements of the Plumbing Code of Australia and is considered a performance solution, provide evidence of design and certification by a registered Certifying Engineer (Hydraulic). 				
Drawing/s of WMS	Yes / No	Drawing no.		
Copy of site and soil evaluation report	Yes / No	Reference		
Certificate of compliance – Hydraulic design / construction for performance solution	Yes / No	Reference		

Certification by plumber and drainer

I certify that the design and/or installation of the wastewater management system has been completed in accordance with the requirements of the *Building Act 1993*, including the Plumbing Code of Australia and Code of Practice for Wastewater Management.

If you're certifying on behalf of the company, fill in section A. If not, fill in section B.

Section A. Company and nominee details

Company name		Company NT registration no.	
Nominee name		Nominee NT registration no.	
Signature		Date	

Section B. Individual details

Individual name		Individual NT registration no.	
Signature		Date	

How to submit

You must submit a copy of this certificate and attachments to the:

- building certifier - for work involving a building permit; or
- Director of Building Control - for plumbing only work (where applicable) within 7 days of the completed work via bas.files@nt.gov.au
- owner
- plumber and/or designer to retain a copy

For more information, contact Building Advisory Services on 08 8999 8985 or email bas@nt.gov.au