Charles Sturt University

Revision 1.0

Infrastructure Design Standards

Module S17: Termite Protection, Vermin Proofing and Pest Management

Division of Finance (Strategic Infrastructure)
Charles Sturt University

Document Control

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1. Introduction

1.1. Overview

The Charles Sturt University Infrastructure Design Standards (the Standards) outline the University's expectations for its built forms to achieve consistency in the quality of the design and construction of those built forms.

The Standards have been developed to provide guidance to the design team and to assist Facilities Management to drive a consistent approach to the design, construction, commissioning, handover, and operation of new capital projects to ensure the new asset is fully integrated into campus life and conforms to the University's standards and policies.

The successful integration of any new project into the day-to-day operation of campus life cannot be underestimated and is vital to ensuring the new asset provides a fully functional platform for Facilities Management clients and the University. The Standards will ensure Facilities Management is successful in supporting the University's strategic objectives now and into the future. The pitfall of viewing any new project as a standalone entity must be avoided as any new project is an extension of the existing campus.

The Standards are aligned with Charles Sturt's requisites for aesthetic appeal, life cycle maintenance and environmental sustainability, while ensuring that there is sufficient scope for innovation and technological advancements to be explored within each project.

1.2. The University

The history of Charles Sturt University dates to 1895, with the establishment of the Bathurst Experiment Farm. Formed progressively through the merge of regional institutions in south-western and western NSW, Charles Sturt was formally incorporated on 19 July 1989 under the Charles Sturt University Act 1989. As one of Australia's newer universities, Charles Sturt has been built on a tradition of excellence in teaching and research spanning more than 100 years.

With over 40,000 current students studying both on-campus and online, Charles Sturt University is the largest tertiary education institution in regional Australia. The University operates six main campuses across New South Wales in Albury-Wodonga, Bathurst, Dubbo, Orange, Port Macquarie, and Wagga Wagga, alongside specialist campuses in Canberra, Parramatta, and Goulburn. Charles Sturt University is structured around three Faculties: Arts and Education; Business, Justice and Behavioural Sciences; and Science and Health.

1.3. University Vision and Values

Charles Sturt University is committed to building skills and knowledge in its regions by offering choice and flexibility to students, while collaborating closely with industries and communities in teaching, research, and engagement. As a significant regional export industry, the University brings both strength and learning back to

its regions, positioning itself as a market-oriented institution. Its goals are to remain the dominant provider of higher education in its regions and a sector leader in flexible learning.

Charles Sturt University believes that wisdom has the power to transform communities. With perseverance and dedication, the University contributes to shaping resilient and sustainable regions for the future. Acknowledging the deep culture and insight of First Nations Australians, the University's ethos is encapsulated by the Wiradjuri phrase *yindyamarra winhanganha,* which translates to "the wisdom of respectfully knowing how to live well in a world worth living in." Through its values, Charles Sturt University fosters a welcoming community and learning environment that supports innovation, drives societal advancement, and gives back to the regions it serves.

1.4. Using the Infrastructure Design Standards

The Infrastructure Design Standards are written to advise Charles Sturt University performance requirements and expectations that exist above and beyond existing industry codes and standards.

The Infrastructure Design Standards do not repeat codes and standards.

Performance to Codes and Standards are a non-negotiable regulatory minimum of any design solution, to be determined for each project by the design team.

The Standards are to be used by all parties who are engaged in the planning, design, and construction of Charles Sturt's facilities. This includes external consultants and contractors, Charles Sturt's planners, designers, and project managers as well as faculty and office staff who may be involved in the planning, design, maintenance, or refurbishment of facilities. All projects must comply with all relevant Australian Standards, NCC, EEO as well as Local Government and Crown Land Legislation.

1.5. Modules

The Standards are divided into the following modules for ease of use, but must be considered in its entirety, regardless of specific discipline or responsibilities:

- S01 Overview and Universal Requirements
- S02 Active Transport
- S03 Acoustics
- S04 Building Management System
- S05 Electrical and Lighting
- S06 Energy Management
- S07 Ergonomics
- S08 Fire and Safety Systems
- S09 Floor and Window Coverings
- S10 Furniture
- S11 Heritage and Culture
- S12 Hydraulic

- S13 Information Technology
- S14 Irrigation
- S15 Mechanical Services
- S16 Roof Access
- **S17 Termite Protection, Vermin Proofing and Pest Management**
- S18 Security Systems
- S19 Signage
- S20 Sustainable Building Guidelines
- S21 Waste Management
- S22 Project Digital Asset and Data Requirements
- S23 Commissioning, Handover and Training

1.6. Related Documents

1.6.1. University Documents

The Standards are to be read in conjunction with the following relevant University documents, including but not limited to:

- Facilities and Premises Policy along with supporting procedures and guidelines
- Charles Sturt University Accessibility Action Plan 2020 - 2023
- Relevant operational and maintenance manuals
- Charles Sturt University Asbestos Management Plan
- Charles Sturt University Signage Guidelines
- Charles Sturt University Modern Slavery Statement
- Charles Sturt University Sustainability Statement
- Charles Sturt University Work Health and Safety Policy
- Charles Sturt University Risk Management Policy
- Charles Sturt University Resilience Policy
- Charles Sturt University Health, Safety and Wellbeing Policy

1.6.2. Federal Legislation

The planning, design and construction of each Charles Sturt University facility must fully comply with current relevant Federal legislation, including but not limited to:

- National Construction Code (NCC)
- Disability Discrimination Act 1992 (DDA)
- Environment Protection and Biodiversity Conservation Act 1999 (EPBC)
- Work Health and Safety Act 2011

1.6.3. NSW State Legislation

The planning, design and construction of each Charles Sturt University facility must fully comply with current relevant Federal legislation, including but not limited to:

- Work Health and Safety Act 2011
- Environmental Planning and Assessment Act 1979 (EP&A Act)
- Building and Development Certifiers Act 2018
- Heritage Act 1977
- Protection of the Environment Operations Act 1997 (POEO Act)
- Design and Building Practitioners Act 2020
- State Environmental Planning Policies (SEPPs)
- Local Government Act 1993

1.6.4. Federal Regulations and Standards

- Relevant Australian or Australian/New Zealand Standards (AS/NZS)
- Safe Work Australia Model Codes of Practice
- Work Health and Safety Regulations 2011
- Disability (Access to Premises – Buildings) Standards 2010
- National Environment Protection Measures (NEPMs)

1.6.5. NSW State Regulations and Standards

- SafeWork NSW Codes of Practice
- Disability (Access to Premises – Buildings) Standards 2010
- Building and Development Certifiers Regulation 2020
- NSW Work Health and Safety Regulation 2017
- Protection of the Environment Operations (General) Regulation 2022
- NSW State Environmental Planning Policies (SEPPs)
- Fire and Rescue NSW Fire Safety Guidelines
- NSW Local Council Development Control Plans (DCPs)

1.6.6. Manufacturer Specifications and Data Sheets

All installation must be carried out in accordance with manufacturer specifications and data sheets to ensure product performance over its intended life and so as not to invalidate any warranties.

1.6.7. Project-Specific Documents

Requirements specific to a particular project, campus, or other variable, will be covered by project specific documentation, such as client briefs, specifications, and drawings. These Standards will supplement any such

project specific documentation. The Standards do not take precedence over any contract document, although they will typically be cross-referenced in such documentation.

Extracts from the Standards may be incorporated in specifications; however, it must remain the consultant's and contractor's responsibility to fully investigate the needs of the University and produce designs and documents that are entirely 'fit for purpose' and which meet the 'intent' of the project brief.

1.7. Discrepancies

The Standards outline the University's generic requirements above and beyond the above-mentioned legislation. Where the Standards outline a higher standard than within the relevant legislation, the Standards will take precedence. If any discrepancies are found between any relevant legislation, the Standards and project specific documentation, these discrepancies should be highlighted in writing to the Manager, Capital Works.

1.8. Departures

The intent of the Standards is to achieve consistency in the quality of the design and construction of the University's built forms. However, consultants and contractors are expected to propose 'best practice / state of the art' construction techniques, and introduce technological changes that support pragmatic, innovative design. In recognition of this, any departures from relevant legislation, or the Standards, if allowed, must be confirmed in writing by the Manager, Capital Works. Any departures made without such written confirmation shall be rectified at no cost to the University.

1.9. Professional Services

All projects at Charles Sturt University require the involvement of adequately skilled and experienced professionals to interpret and implement the Standards. Consultants or contractors lacking proper qualifications and licenses are not permitted to conduct any work.

1.10. Structure of Document

This document is structured into 4 sections:

Section 1 Introduction (this Section).

Section 2 General Requirements – outlines the general requirements or design philosophies adopted at Charles Sturt University.

Section 3 Supporting Documentation – Legislation, Standards, Codes of Practice, University Policies, and other applicable technical references.

Section 4 Specifications (if applicable) – materials specifications and/or preferred lists for materials, processes or equipment used by Charles Sturt University.

2. General Requirements

2.1. Sealing External Areas from Vermin

Effective vermin control relies on the combination of:

- Physical barriers to deny access by vermin,
- A broad scope cleaning and sanitation program to include external areas of the plant, and vigorous housekeeping,
- Chemical treatments using perimeter baiting and,
- An interior regime of indicator baits and traps to verify that no vermin have breached the control measures and entered the premises.

The architectural design elements shall consider the consequences resulting from problems created by nesting birds. In many locations the University has a significant health risk created by exotic species, such as: starlings, pigeons, sparrows etc., nesting on exposed beams under roof overhangs and verandas.

2.2. Penetrations

Floor and wall penetrations made by pipes, ducts, and conduits must be securely sealed to reduce the potential ingress of rodents and insects. Similarly, joints in structural elements must also be tightly sealed to prevent any intrusion.

2.3. Termite Prevention Treatment

Termite prevention systems shall be included in any new building project and shall also be included in refurbishment projects wherever possible. The University's preferred termite prevention is through a passive non-chemical treatment similar in all ways to Termi-mesh stainless steel barrier or TERM Seal Multi-purpose Passive or TERM Seal FRM Passive. In all cases the approved product shall only be installed by an authorised agent and a compliance certificate shall be provided prior to award of Practical Completion and a compliance sticker affixed to the building in a location as approved by the University.

2.3.1. NCC Regulations

The National Construction Code Part 3.4 discuss the following elements in relation to Termite Risk Management:

Requirements for Termite Management Systems

This section applies to Class 1 and 10 buildings located in areas where subterranean termites pose a known risk. It specifies that termite management systems are required when a primary building element is susceptible to termite attack. Materials that are not considered susceptible include steel, aluminium, concrete, masonry, and timber that is either naturally termite-resistant or preservative-treated. For buildings with a mix of termite-

resistant and susceptible materials, only the susceptible elements need a management system. Although masonry is not typically attacked by termites, they can enter through mortar and joints.

Termite Management Systems

When a termite management system is required, it must be chosen according to Table 3.4.2 and comply with AS 3660.1 or be tested and pass requirements outlined in AS 3660.3. A durable notice must be installed, detailing the termite management system used, the installation date, the chemical life expectancy (if applicable), and recommendations for future inspections. Chemical treatments must be listed on the appropriate authority's pesticides register. The system's components must be integrated effectively to form a complete termite management solution.

Durable Notice

A durable notice must be permanently affixed to a prominent location on the building, such as near the electrical meter box. It should include information about the termite management system, its installation date, the chemical's life expectancy, and recommendations for ongoing inspections. The notice must be clearly written on a durable material that does not deteriorate or fade, ensuring it remains visible and readable for future building occupants.

2.4. Animal Pest Control Practices

2.4.1. General Animal Pest Control Practices

Cleanliness

- **Garbage Containers**: Keep garbage containers clean, free of odors, and covered at all times. Proper sanitation reduces habitat and food sources for pests.
- **Around Containers**: Ensure areas around garbage containers are free of spillage or garbage to prevent the accumulation of trash or debris.
- **Grounds Maintenance**: Maintain grounds by removing high weeds, trash, old equipment, and debris, as these conditions create ideal harbourage for rodents.

Structural Integrity

- **Building Exterior**: Maintain the building exterior in good repair, ensuring there are no holes or openings to allow for vermin and insect access.
- **Corrective Measures**: Address deficiencies in building penetrations with appropriate corrective measures such as cementing, screening, caulking, or installing stripping on door bases.
- **Door Sweeps**: Ensure all applicable doors have door sweeps that produce a good seal with the ground to prevent pest entry.

3. Supporting Documentation

These below lists are not all-inclusive and those associated with the project are responsible for identifying and complying with all standards relevant to the scope of works.

3.1. Supporting Legislation

National Construction Code (NCC)

Work Health and Safety Act 2011 (NSW)

Work Health and Safety Regulation 2017 (NSW)

Biosecurity Act 2015 (NSW)

Pesticides Act 1999 (NSW)

Pesticides Regulation 2017 (NSW)

Medicines, Poisons and Therapeutic Goods Act 2008 (ACT)

Agricultural and Veterinary Chemicals (Administration) Act 1992 (ACT)

Agricultural and Veterinary Chemicals Code Act 1994 (ACT)

Environment Protection Act 1997 (ACT)

3.2. Supporting Standards

Standard Number	Standard Title
AS 2507:1998	The Storage and Handling of Pesticides
AS 2476:2008	General Fumigation Procedures
AS 3660.1:2014	Termite Management - New building work
AS 3660.2:2017	Termite management - In and around existing buildings and structures - Guidelines
AS 3660.3:2014	Termite management - Assessment criteria for termite management systems
AS 4349.3:2010	Inspection of buildings - Timber pest inspections

3.3. Industry Codes of Practice

NSW Code of Practice and Standard Operating Procedures for the Effective and Humane Management of Pest Birds

https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0010/1394650/Code-of-Practice-and-Standard-Operating-Procedures-for-the-Effective-and-Humane-Management-of-pest-birds.PDF

NSW Code of Practice and Standard Operating Procedures for the Effective and Humane Management of Rodents

https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/1394651/Code-of-Practice-and-Standard-Operating-Procedures-for-the-Effective-and-Humane-Management-of-rodents.PDF

Australian Pesticides and Veterinary Medicines Authority

https://www.apvma.gov.au/

Safe Use of Pesticides Including Herbicides in Non-Agricultural Workplaces

https://www.safework.nsw.gov.au/__data/assets/pdf_file/0005/52871/Safe-use-of-pesticides-in-non-agricultural-workplaces-Code-of-practice.pdf

Industry Code of Practice for Termite Management

https://aepma.com.au/Resources/FMFiles/Codes_of_Practice/Code_of_Best_Practice_for_Termite_Management.pdf

Industry Code of Best Practice for Termite Management During Constructions

https://aepma.com.au/Resources/FMFiles/Codes_of_Practice/AEPMA_Code_of_Best_Practice_for_Termite_Management_During_Construction.pdf

Code of Practice for Pest Management in the Food Industry (2021)

https://aepma.com.au/Resources/PageContent/Files/c30e6039-7c59-413e-80b2-f539e04692b5.pdf

Code of Practice for Rodent Management

https://aepma.com.au/Resources/PageContent/Files/04380aa7-3b0d-41a0-8b19-77b4de15371e.pdf

Food Standards Australia New Zealand Food Standards Code Chapter 3 (Australia Only)

https://www.foodstandards.gov.au/sites/default/files/publications/SiteAssets/Pages/safefoodaustralia3rd16/Appendix%207%20-%20Pest%20management.pdf

3.4. University Documents

Facilities and Premises Policy

https://policy.csu.edu.au/document/view-current.php?id=465&version=1

Facilities and Premises Procedure - Pesticide Management and Notification

https://policy.csu.edu.au/document/view-current.php?id=340&version=2