

HCAA ADVISORY NOTE ON THE CERTIFICATION OF SIPHONIC DRAINAGE SYSTEMS FOR METAL ROOF AND SUSPENDED STORMWATER SYSTEMS

REVISION 2: AUGUST 2022



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State and territory legislation pertaining to building development, design and the like generally have requirements that specify minimum qualifications and experience of personnel practising in the field of design.

In most instances, the onus is on the practitioner to ensure that they are suitably qualified and experienced prior to providing certification of the systems that they have designed.

The Building Code of Australia, forming part of the National Construction Code series, is legislated within each state and territory individually in Australia.

The Building Code of Australia, or the National Construction Code itself, carries two definitions: one for a Professional Engineer, and the second for an Appropriately Qualified Person, both requiring qualifications and/or experience in the relevant discipline in question.

The definitions have been provided below, extracted from the Building Code of Australia, Vol. 1:

Professional Engineer means a person who is:

- a) if legislation is applicable - a registered **professional engineer** in the relevant discipline who has appropriate experience and competence in the relevant field, or
- b) if the legislation is not applicable

Definitions:


(i) registered in the relevant discipline in the National Engineering Register (NER) of the Institution of Engineers Australia (which trades as 'Engineers Australia'), or

(ii) eligible to become registered on the Institute of Engineers Australia's NER and has appropriate experience and competence in the relevant field.

State and territory variation

For volume three, see (*Tas. Professional Engineer*)

Appropriately qualified person means a person who is recognised by the *appropriate authority* as having qualifications and/or experience in the relevant discipline in question.



A practitioner must therefore ensure that their qualifications and experience is relevant to the service that they are undertaking engineering for, and also when providing design certification.

In conjunction with our affiliates, the HCAA have reviewed the risks associated with changes to many states' and territories' legislation in relation to requirements, that any design statement shall not be misleading.

In some legislation, the provision of a misleading statement carries fines up to \$2m if not more, and up to 2 years' imprisonment, or both. Practitioners should be very wary of providing statements that could be determined to be misleading.

As the term 'misleading' is very broad in its cover, it would also include practitioners undertaking design certification in fields that they are not suitably qualified nor suitably experienced in, or fields that require specialty models that are not publicly available due to Design and Construct (D&C) companies' intellectual property.

This is often the case with siphonic systems, as the system modelling software needed to undertake the complex iterative calculations have been developed and verified by the suppliers/manufactures of the siphonic equipment and components. Often the models are not always available and would often form part of the D&C work or when a modelling software is available, the software is not compatible with other suppliers/manufacturers equipment and components.

In these instances, we would highly recommend one, or a combination of, the approaches below:

A hydraulic consultant, engineer or designer, does not undertake certification of a siphonic system unless they:

a) are a practising siphonic engineer or designer engaged in the design of siphonic systems utilising verified computer modelling software; or

b) have engaged, via a subcontract, a person equal to a); or

c) are transferring the design responsibility to a D&C contractor with a person equal to a), and the hydraulic consultant / engineer / designer do not provide certification for the project.

We acknowledge the difficulty of achieving these outcomes, given the standard practices that have been developed over the years, the Design and Construct world, and the necessity to provide statements and the like that appease clients' wants and needs.

We would encourage you to have early consultation with your clients, provide adequate exclusions and inclusions within your fee proposals that demonstrate your ability to undertake certification of siphonic metal deck roof and suspended siphonic stormwater systems.



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These suggestions are the formal position of the HCAA in regards to this matter. These statements are provided in the public interest, and the HCAA may not have any specific jurisdiction on the related matter. A responsible person or authority is expected to take relevant advice into consideration as appropriate to their given circumstance. The HCAA has issued this document for use by competent personnel deemed by their local and state/territory-based engineering community and regulations. All data within this document is to be suitably verified by a suitably qualified person before use. The HCAA provides no warranty, no guarantee, or the like to the accuracy, validity or appropriateness of this data to your situation. Please be advised that you are using these documents at your own risk.

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