

Building and Plumbing Newsflash 569

Clarification on the requirements for a site classification report and sanitary drainage articulation design (updated)

Purpose

The purpose is to provide informative design concepts for practitioners and to clarify:

- when a site classification report and a sanitary drainage articulation design (articulation design) must be supplied to local government in accordance with schedule 6 of the Plumbing and Drainage Regulation 2019
- who can prepare a site classification report or an articulation design.

Background

One of the most common causes of damage to building foundations in Queensland is the failure of the footing system, particularly in areas that have reactive or unstable soils. Investigation of in-ground drainage system failures often reveals broken or leaking pipework.

Defective drainage may not be the initial cause of damage to a building's footing system. However, once in-ground drainage systems are damaged, the resulting leakage of wastewater into reactive soils around the footings of a building is likely to contribute to soil expansion and cause further damage.

On 1 July 2019, the [Plumbing and Drainage Act 2018](#) and the [Plumbing and Drainage Regulation 2019](#) (the regulation) took effect and address this risk by requiring additional information where the proposed work involves sanitary drainage.

Where sanitary drainage is part of the proposed work, Schedule 6 of the regulation requires that a site classification report be submitted with each [Form 1— Permit work application for plumbing, drainage and on-site sewerage work](#).

Additionally, an articulation design must also be submitted for each property that has been identified in the soil classification report as having a reactive soil class H, E or P site classification.

In certain circumstances, these documents must be prepared when designing or constructing a building under the [Queensland Building and Construction Commission Act 1991](#) (QBCC Act). To ensure plumbing practitioners and local government plumbing inspectors are aware of any site conditions which may affect a sanitary drainage design, Schedule 6 of the regulation provides this information is also made accessible under the plumbing regulatory framework. A copy of the site classification report prepared for building purposes for the same premises can be used for the purposes of Schedule 6.

Application

The articulation design must include details of how the sanitary drain is to pass through or under the slab footing edge beam.

As the requirement is aimed at the potential for damage to buildings, a local government may accept a permit application without a site classification report or an articulation design where the sanitary

drainage covered by the permit will be installed beyond the perimeter of a building or in a location which will have no effect on the building structure.

For example, a site classification report and articulation design would not be required for permit applications:

- to alter an existing combined sanitary drain, or
- where the building is elevated on building poles or similar structural supports, or
- where the building does not contain a ground floor structural concrete slab through which the sanitary drain passes.

What happens when a site classification report results in two different soil classifications?

In some instances, a site classification report may result in the site being identified with two differing site classifications, one for the overall site and another specifically for the building area. In these cases, it would be reasonable for the local government to only receive an articulation design based on the classification of the building area.

Example 1

An engineer could classify the entire site as having a P type site classification, but for the specific building area may assign a H type soil classification. In this instance, the local government can accept an articulation design for a H type site.

Example 2

Where the building area is re-classified from a H, E or P type site resulting in either an A, S or M classification for the building area then there would be no requirement for an articulation design to be submitted to local government.

What happens when a site classification report is not available?

There may be some instances where a site classification report is not available (i.e. it is not economically feasible or technically possible to obtain a site classification report). For example, the permit application may involve renovation of a shop fit out in an existing commercial premises and it may not be possible to drill a test hole within the premises.

In order to ensure that work can continue, a local government may accept a permit application without a soil classification report if either:

- an articulation design is provided based on the maximum potential movement that could be expected for the site. For example, where the work involves renovation of a shop fit out in an existing commercial premises local government could accept an articulation design based on an E soil classification site with expected movement of 150 millimetres
- a Registered Professional Engineer of Queensland with relevant competency provides advice that the proposed sanitary drainage will not impact on the structural adequacy of the building footings
- where a local government is satisfied, based on knowledge of the local area or the particular building, that there is a low risk of damage to a building's footings. For example, local government may be aware that the building's footings are connected to bedrock. In this case, the local government could determine that there is limited potential for building foundations to be affected by soil movement and decide to dispense with the requirement for a site classification report and an articulation design.

Requirements

Who can prepare a site classification report?

A site classification report is a report prepared by a person who holds a site classifier licence issued by the Queensland Building and Construction Commission (QBCC) under the QBCC Act.

Who can prepare an articulation design?

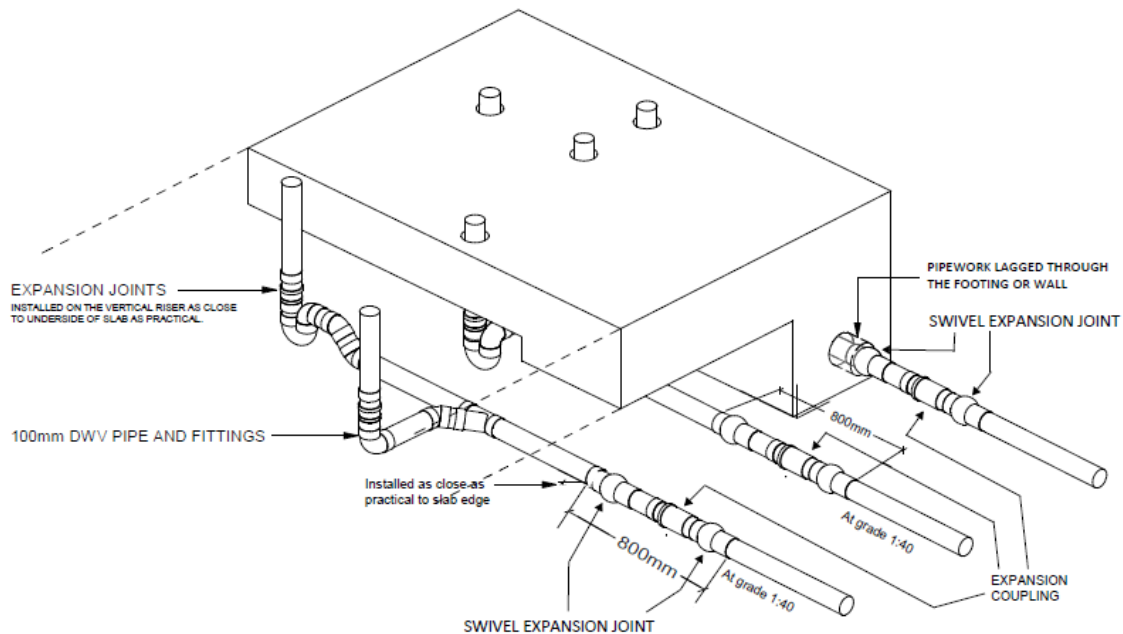
Articulation design can be prepared by the following people:

- a Registered Professional Engineer of Queensland with relevant competency
- a person who holds a hydraulic services design licence issued by the QBCC under the QBCC Act
- a person who holds either a trade contractor or nominee supervisor plumbing and or drainage licence issued by the QBCC under the QBCC Act. They can only prepare an articulation design for work that is for:
 - the licensee's personal use, or
 - use in drainage work to be performed by the licensee personally.

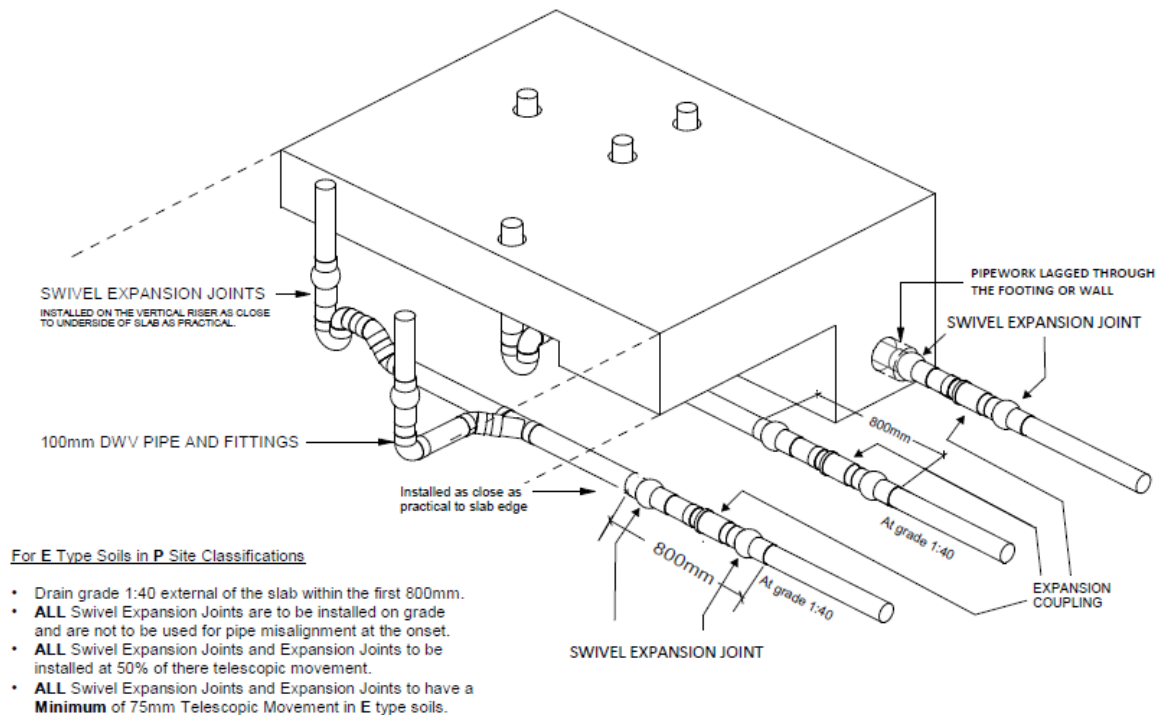
Due to the specialised nature of articulation design, it is recommended that practitioners are experienced in this field and are confident in their ability to undertake the work competently.

Informative design

The below articulation designs are considered informative designs and are intended to assist practitioners to prepare articulation designs. The informative designs should not be considered an endorsed design but rather are designs which provide elements intended to assist understanding through contextual information.



**TYPICAL SITE CLASSIFICATION DESIGN for TYPE H ARTICULATION
(informative)**



**TYPICAL SITE CLASSIFICATION DESIGN for TYPE E ARTICULATION
(informative)**

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