



Certification Performance Criteria Guidance

B4.4 Earth Retaining Structures

Performance Criteria

Certifiers must satisfy themselves that adequate details for any earth retaining structures have been prepared and that sufficient design calculations, which take account of the findings of the ground investigation report, have been undertaken to demonstrate the adequacy of the design.

Background

Retaining structures may occur within the footprint of the building but also may be required to retain slopes generally within the boundaries of the development comprising the permit application.

Retaining structures may also provide support to existing buildings in the vicinity of the proposed works and it is a requirement of Requirement 1.1 that the work being undertaken does not impair any part of another building. Certifiers should therefore satisfy themselves that adequate enquiry has been made regarding the effect of the construction of any retaining structures on existing buildings.

Guidance

Certification will embrace the performance of the retaining structure and also the overall stability of any slope against which the structure is located.

Loading parameters must reflect the support conditions (propped or cantilevered) and any surcharges.

Certifiers must see that calculations have been prepared in accordance with an accepted methodology, have been checked by a suitably experienced person and that the design output has been properly reflected in the permit application drawings.

BS 8002:1994 Code of Practice for earth retaining structures was withdrawn in March 2010 and although it is still listed in 'Technical Guidance Document Part 1: Structure', care should be exercised when using withdrawn standards.

CIRIA publication 'C516 Modular Gravity Retaining Walls' provide useful guidance for the design and specification of low height proprietary wall types such as Gabion and Crib walls.

Examples of Major Non-conformances

The design of any earth retaining structures clearly does not meet the requirements of Requirements 1.1 and 1.2.

Absence of suitably checked structural calculations and/or details.

Calculations and/or details are grossly inadequate in relation to the size/complexity of the project.

Failure to document why there are discrepancies between the recommendations in the ground investigation report for the design of the earth retaining structures and the parameters used in the design.

Examples of Improvement Issues

Deficiencies in the building plans e.g. failure to identify layout, level changes, dimensions, construction and typical reinforcement details.

Inadequate or insufficient calculations.

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